



# Indian Health Focus

## *Youth*



1998-99

U.S. Department of Health and Human Services

Indian Health Service

Office of Public Health

Office of Program Support

*Program Statistics Team*

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### Indian Health Service

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# INTRODUCTION



The Indian Health Service (IHS) is an agency of the Department of Health and Human Services. The IHS goal is to assure that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian and Alaska Native people. The mission of the IHS, in partnership with American Indian and Alaska Native people, is to raise their physical, mental, social, and spiritual health to the highest level.

The IHS has carried out its responsibilities through developing and operating a health services delivery system designed to provide a broad-spectrum program of preventive, curative, rehabilitative, and environmental services. This system integrates health services delivered directly through IHS facilities, purchased by IHS through contractual arrangements with providers in the private sector, and delivered through Tribally-operated programs and urban Indian health programs.

The IHS is concerned with the health of American Indians and Alaska Natives of all ages. The IHS presents an overview of the health status of Indians in its annual publication, *Trends in Indian Health*. However, IHS recognizes that there are segments and conditions of the Indian population that require special attention, such as infants, youth, women, the elderly, and injuries. This publication examines the health status of Indian youth beginning with birth. It is based on data published in the IHS publications 1998-99 *Trends in Indian Health* and 1998-99 *Regional Differences in Indian Health*.

The population of interest for this publication is American Indian and Alaska Native youth residing in the IHS service area. The IHS service area comprises the geographic areas in which IHS has responsibility (counties on and near reservations). Approximately 60 percent of American Indians and Alaska Natives in the U.S. reside in the IHS service area. In 1999, there were 1.49 million Indians in the IHS service area compared to 2.44 million in the entire U.S.





## Summary of Data Shown

The American Indian and Alaska Native population is a younger population than the general U.S. population. According to the U.S. 1990 Census, 33 percent of the population is younger than 15 years in contrast to 22 and 20 percent for the U.S. All Races and White populations, respectively. Indians also have less education and income than the general population. The 1990 Census also showed that 65.3 percent of Indians aged 25 and older are high school graduates or higher, compared with 75.2 and 77.9 percent for the U.S. All Races and White populations, respectively. The 1990 Census indicates that 37.7 percent of Indians aged 6 to 11 years live below the poverty level in contrast to 18.3 and 12.5 percents for the U.S. All Races and White populations, respectively. For 12 to 17 year old youth, the corresponding percentages are 33.1, 16.3, and 11.0.

Indian women become mothers at relatively young ages. For Indians, 45.7 percent of mothers having their first child are under age 20. This compares to 24.9 percent for the U.S. All Races population and 22.3 percent for the U.S. White population. The infants of Indian mothers are more likely to die before their first birthday than those of U.S. All Races or White mothers. However, the distribution of infant deaths by age differs for the Indian population in comparison to the U.S. All Races and White populations. That is, Indian infants are more likely to die during the postneonatal period (28 days to 1 year after birth) than the neonatal period (birth to under 28 days), whereas the risks are reversed for the other two population groups.

Indians die at relatively younger ages than the general population. Twelve percent of Indian deaths pertain to ages under 25 compared to 4 and 2 percent for the U.S. All Races and White populations, respectively. Indian males under 25 die at a relatively higher proportion than Indian females. The percentage of Indian male deaths pertaining to ages under 25 is 14 in contrast to 10 for females. These Indian rates are adjusted for misreporting of Indian race on state death certificates.

The top two leading causes of Indian infant deaths are sudden infant death syndrome and congenital anomalies; the order is reversed for Whites. For All Races, the leading causes are congenital anomalies and disorders related to short gestation and low birthweight. Accidents is the leading cause of death among age groups, 1 to 4, 5 to 14, and 15 to 24 years, for the Indian and U.S. All Races and White populations. For 1 to 4 year old Indian youth, the second leading cause of death is homicide. For U. S. All Races and Whites in this same age group, congenital anomalies is the second leading cause of death. Homicide is the second leading cause of death for 5 to 14 year old Indian youth. Malignant neoplasms is the second leading cause of death for 5 to 14 year old U. S. All Races and White youth. The second and third leading causes for Indians and Whites aged 15 to 24 years are suicide and homicide. For the U.S. All Races population, the order is reversed. These Indian rates are adjusted for misreporting of Indian race on state death certificates.





## Summary of Data Shown

Substance abuse, especially alcohol, among youth is a serious problem in many Indian communities. The problem is already manifesting itself through alcoholism death rates for Indians, 15 to 24 years of age. The Indian rate is 3.4 deaths per 100,000 population compared to 0.3 for the U.S. All Races and White populations of this age group. It is a greater problem for Indian males than Indian females. The Indian male death rate due to alcoholism for 15 to 24 year old youth is over 5 times the female rate. In comparison to alcoholism, there is a smaller gap in the drug-related death rates for Indians and U.S. All Races and Whites. The Indian rate for 15 to 24 year old youth is 4.1 deaths per 100,000 population compared to 2.4 for U.S. All Races and 2.5 for U.S. Whites. These Indian rates are adjusted for misreporting of Indian race on state death certificates.

Indian youth are more likely to die from accidents, homicide, and suicide than youth in the general population. The accident death rate for Indians aged 5 to 14 years is 2.3 and 2.5 times the corresponding rates for the U.S. All Races and White populations, respectively. For 15 to 24 year old youth, these ratios are 2.3 to 1 and 2.2 to 1. Likewise, the Indian suicide death rate for 15 to 24 year old youth is 2.9 and 2.8 times the corresponding rates for the U.S. All Races and White populations, respectively. Indian youth under 25 years of age die from homicide at a greater rate than the general population. Indian male youth are at greater risk than Indian female youth, dying at higher rates for accidents, suicides, and homicides. These Indian rates are adjusted for misreporting of Indian race on state death certificates.

The youngest Indian children, those under 1 year of age, have the highest health care utilization rates among Indian youth. They comprise 1.5 percent of the IHS user population but consume considerably higher percentages of IHS health services, i.e., 4.0 percent of the ambulatory medical clinical impressions, 5.8 percent of the inpatient discharges, and 4.7 percent of the inpatient days.

Respiratory system diseases is the leading cause of hospitalization for Indian patients in age groups under 15 years for both sexes together, as well as for Indian males and females separately in these age groups. Obstetric deliveries and complications of pregnancy is the leading cause of hospitalization for the 15 to 24 year Indian age group. Obviously, this is the leading cause for Indian female patients in this age group; for Indian male patients, the leading cause is injury and poisoning. Injury and poisoning is the second leading cause of hospitalization for Indian age groups (both sexes) 5 to 24 years of age and for Indian males in age group 5 to 14 years. Other primary causes of hospitalization for Indian youth are perinatal period conditions (under 1 year) and digestive system diseases (over 1 year).





## Summary of Data Shown

Supplementary classification conditions (e.g., other preventive health services, well child care, physical examination, tests only, hospital/medical/surgical follow-up) is the leading cause of ambulatory medical visits for Indian patients under 1 year of age (both sexes, males, and females). For Indian patients in age groups 1 to 14 years, the leading cause is respiratory system diseases, both sexes and females. However, for males in age group 5 to 14, the leading cause is supplementary classification conditions. Complications of pregnancy, childbirth, and the puerperium is the leading cause for Indians 15 to 24 years of age, both sexes and females. For Indian males in this age group, supplementary classification conditions is the leading cause. Respiratory system diseases is the second leading cause of ambulatory medical visits for Indians under 1 year of age (both sexes and males and females). Supplementary classification conditions is the second leading cause of ambulatory medical visits for Indians 1 to 4 years of age (both sexes and males and females). Supplementary classification conditions is the second leading cause for Indians 5 to 14 years of age, both sexes and females, and 15 to 24 years of age, both sexes and females. Respiratory system diseases is the second leading cause for males 5 to 14 years of age, and injury and poisoning is the second leading cause for Indian males in the 15 to 24 year age group.







# Sources and Limitations of Data

## POPULATION STATISTICS

The IHS service population consists of American Indians and Alaska Natives identified to be eligible for IHS services. IHS service population estimates are based on official U.S. Bureau of the Census county data. The Census Bureau enumerates those individuals who identify themselves as being American Indian, Eskimo or Aleut. The IHS service population is estimated by counting those American Indians, Eskimos, and Aleuts (as identified during the census) who reside in the geographic areas in which IHS has responsibilities (“on or near” reservations, i.e., contract health service delivery areas). These people may or may not use IHS services.

IHS service populations between census years (e.g., 1980 and 1990) are estimated by a smoothing technique in order to show a gradual transition between census years. IHS service populations beyond the latest census year (1990) are projected through linear regression techniques, using the most current 10 years of Indian birth and death data provided by the National Center for Health Statistics. The natural change (estimated number of births minus estimated number of deaths) is applied to the latest census enumeration.

IHS user population estimates are based on data from the IHS Patient Registration System. Patients who receive direct or contract health services from IHS or Tribally-operated programs are registered in the Patient Registration System. Those registered Indian patients that had at least one direct or contract inpatient stay, ambulatory

medical visit, or dental visit during the last 3 years are defined as users. IHS user population figures are used for calculating IHS patient care rates. In contrast, IHS service population figures are used in calculating Indian vital event rates since State birth and death certificates do not provide information on use of IHS services.

The social and economic data contained in this publication are from the 1990 Census. They reflect the characteristics of persons that self-identified as American Indian, Eskimo, or Aleut during the 1990 Census.

## VITAL EVENT STATISTICS

American Indian and Alaska Native vital event statistics are derived from data furnished annually to the IHS by the National Center for Health Statistics (NCHS). Vital event statistics for the U.S. population were derived from data appearing in various NCHS publications, as well as from some unpublished data from NCHS. NCHS obtains birth and death records for all U.S. residents from the State departments of health, based on information reported on official State birth and death certificates. The records NCHS provides IHS contain the same basic demographic items as the vital event records maintained by NCHS for all U.S. residents, but with names, addresses, and record identification numbers deleted. It should be noted that Tribal identity is not recorded on these records. Tabulations of vital events for this publication are by place of residence.





## Sources and Limitations of Data

It is known that there is misreporting of Indian race on State death certificates, especially in areas distant from traditional Indian reservations. In order to determine the degree and scope of the misreporting, IHS conducted a study utilizing the National Death Index (NDI) maintained by the NCHS. The study involved matching IHS patient records of those patients who could have died during 1986 through 1988 with all death records of U.S. residents for 1986 through 1988 as contained on the NDI. The results were published in a document entitled, *Adjusting for Miscoding of Indian Race on State Death Certificates*, November 1996. The study revealed that on 10.9 percent of the matched IHS-NDI records, the race reported for the decedent was other than American Indian or Alaska Native. The percentage of records with inconsistent classification of race ranged from 1.2 percent in the Navajo Area to 28.0 and 30.4 percent in the Oklahoma and California Areas, respectively.

The results of the NDI study provide sufficient numbers to calculate adjustments for each IHS Area, IHS overall, and selected age groups. In addition to these adjustments based on the study findings, IHS assumed the following: a) the results from 1986-88 apply to other years, b) IHS age-group adjustments applied also to each Area, and c) the Area adjustments applied to the causes of death used in this publication (i.e., if an Area's total deaths needed to be increased by 10 percent, then the deaths for each cause of death would also increase by this same rate). These assumptions cannot be statistically supported by the results of the study. However, IHS felt that it was necessary to adjust all of the death rates in this publication to provide a meaningful and comprehensive look at health status. IHS also believes that they are reasonable adjustments.

These NDI adjustments were used for the first time in the 1997 edition of this publication. Both unadjusted and adjusted information is shown, as applicable. The adjustments were applied to the results obtained from using an unadjusted death file.

### PATIENT CARE STATISTICS

Patient care statistics are derived from IHS reporting systems. There are four main patient care reporting systems. The Monthly Inpatient Services Report is a patient census report that is prepared by each IHS hospital. It indicates the number of discharges and days by type of service (e.g., adult, pediatric, obstetric, newborn), and is used for the direct inpatient workload statistics. The Inpatient Care System is the source of IHS hospital inpatient data pertaining to various patient characteristics (age, sex, principal diagnoses, other diagnoses, community of residence, etc.). The data are collected daily, one record per discharge. The Contract Care System is the source of similar contract hospital inpatient data.

The Ambulatory Patient Care System is the source of data pertaining to the number of ambulatory medical visits at IHS facilities by various patient characteristics (age, sex, clinical impression, community of residence, etc.). The data are collected daily, one record per ambulatory medical visit. The Contract Care System is the source of similar contract ambulatory medical visit data.





# Sources of Additional Information

Additional Indian health status information can be obtained from the IHS Program Statistics Team. Specific responsibilities are as follows:

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This publication, other IHS statistical publications, and additional IHS statistical information are available on the IHS Program Statistics Team Web Site at:

**[http://www.ihs.gov/NonMedicalPrograms/IHS\\_Stats/](http://www.ihs.gov/NonMedicalPrograms/IHS_Stats/)**







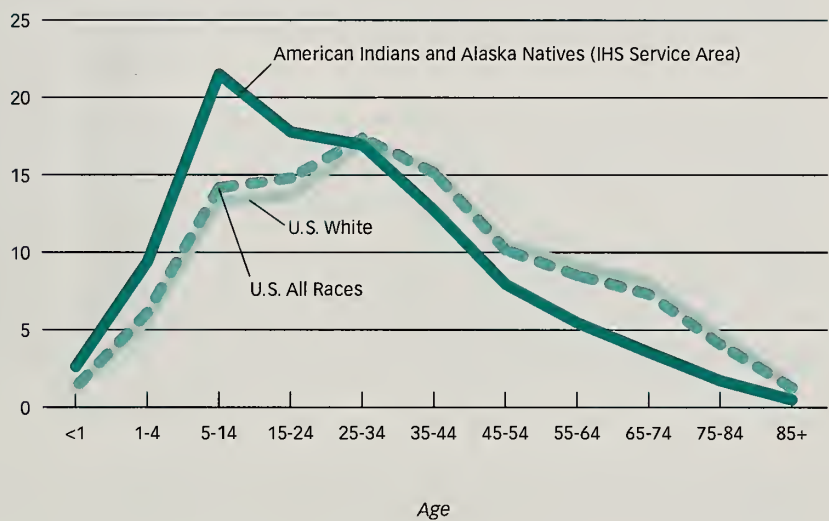
# Charts and Tables

**CHART 1**

## Population by Age, 1990

The Indian population is considerably younger than the general population. According to the 1990 census, the median age of the Indian population is 24.2 years compared to 32.9 for the U.S. All Races population and 34.4 for the U.S. White population. For Indians, 33 percent of the population is younger than 15 years in contrast to 22 and 20 percent for the U.S. All Races and White populations, respectively.

Percent of Total



**TABLE 1**

## Percent Age Distribution

Age Group	American Indian and Alaska Native <sup>1</sup>	U.S. All Races	U.S. White
All Ages	100.000	100.000	100.000
Under 1 year	2.616	1.294	1.204
1-4 years	9.390	6.086	5.631
5-9 years	11.239	7.277	6.819
10-14 years	10.251	6.881	6.437
15-19 years	9.470	7.138	6.682
20-24 years	8.286	7.647	7.273
25-29 years	8.729	8.569	8.332
30-34 years	8.198	8.791	8.690
35-39 years	6.971	8.027	8.053
40-44 years	5.740	7.083	7.265
45-49 years	4.353	5.578	5.802
50-54 years	3.577	4.564	4.760
55-59 years	2.965	4.235	4.491
60-64 years	2.485	4.268	4.613
65-69 years	2.077	4.066	4.457
70-74 years	1.466	3.215	3.569
75-79 years	1.090	2.461	2.747
80-84 years	0.619	1.582	1.779
85 years & over	0.478	1.238	1.396
Median Age	24.2 years	32.9 years	34.4 years

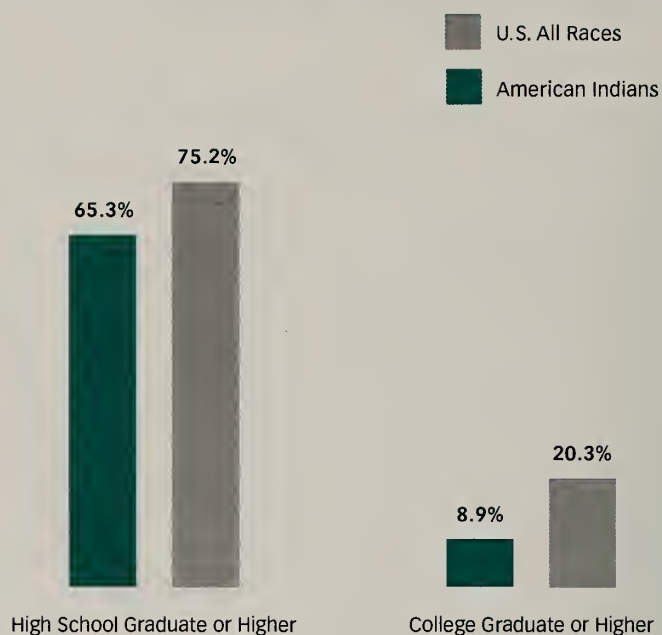
<sup>1</sup> Based upon data from the 1990 Census modified age, race, and sex file, and current IHS service area boundaries. Percentage point distributions were adjusted for error due to rounding. More recent population estimates for the American Indian and Alaska Native population by age and sex are unavailable at the county level. As a result, IHS service area estimates by age and sex, which need to be based on county level data, could not be prepared.



## CHART 2.1

### Educational Attainment, American Indians and U.S. All Races, 1990 Census

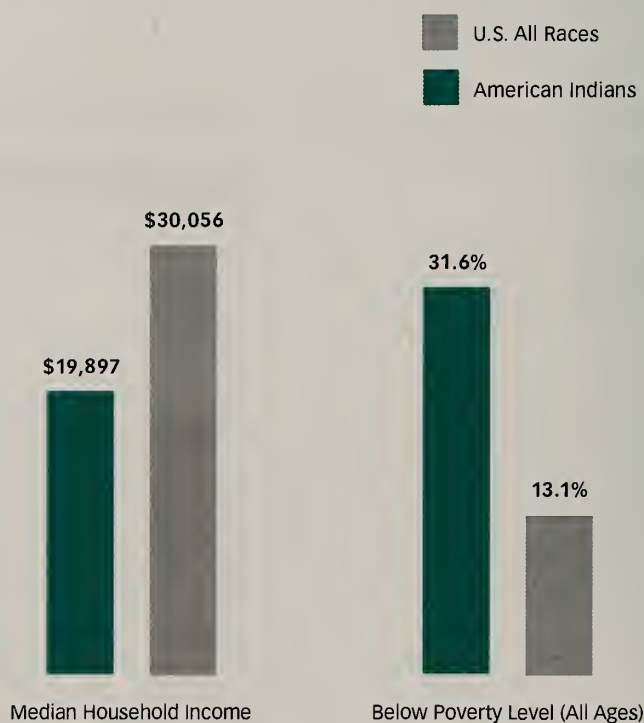
Indian youth enter the job market with a lower educational level than youth in the general population. According to the 1990 census, 65.3 percent of Indians aged 25 and older are high school graduates or higher, compared with 75.2 and 77.9 percent for the U.S. All Races and White populations, respectively. For bachelor's degree or higher, the corresponding percentages are 8.9, 20.3, and 21.5.



## CHART 2.2

### Income Status in 1989, American Indians and U.S. All Races, 1990 Census

Indian youth have a lower economic status than youth in the general population. According to the 1990 Census, the median household income for Indians is \$19,897, for U.S. All Races it is \$30,056, and for U.S. Whites it is \$31,435. During this same period, 31.6 percent of Indians of all ages live below the poverty level in contrast to 13.1 and 9.8 percent for the U.S. All Races and White populations, respectively. For 6 to 11 year old persons, the corresponding percentages are 37.7, 18.3, and 12.5. For 12 to 17 year old persons, the corresponding percentages are 33.1, 16.3, and 11.0.





**TABLE 2****Selected Economic Profiles for the United States, 1990 Census**

	American Indian & Alaska Native	All Races	White	Black	Asian & Pacific Islander	Hispanic
<b>Educational Attainment</b>						
(Persons 25 years and older):						
Percent less than 9th grade	14.1	10.4	8.9	13.8	12.9	30.7
Percent 9th to 12th grade, no diploma	20.6	14.4	13.1	23.2	9.5	19.5
Percent high school grad or higher	65.3	75.2	77.9	63.1	77.5	49.8
Percent bachelor's degree or higher	8.9	20.3	21.5	11.4	36.6	9.2
<b>Employment Status by Sex</b>						
(Civilian persons 16 years and older):						
Percent unemployed, males	16.2	6.4	5.3	13.7	5.1	9.8
Percent unemployed, females	13.4	6.2	5.0	12.2	5.5	11.2
<b>Household Income in 1989</b>						
Median household income	\$ 19,897	\$30,056	\$31,435	\$19,758	\$36,784	\$24,156
<b>Percent Below the Poverty Level by Age</b>						
All ages	31.6	13.1	9.8	29.5	14.1	25.3
Under 5 years	43.1	20.1	13.8	44.0	17.5	33.4
5 years	41.6	19.7	13.6	42.8	18.0	33.9
6 to 11 years	37.7	18.3	12.5	39.8	17.3	32.6
12 to 17 years	33.1	16.3	11.0	35.5	16.3	30.3
18 to 64 years	27.7	11.0	8.5	23.4	13.0	21.3
65 to 74 years	26.9	10.4	8.4	28.6	11.3	21.9
75 years and older	33.3	16.5	14.6	37.3	13.5	27.8

**Note:** American Indian data are for residents of the 35 Reservation States.

(South Carolina was added as a Reservation State in FY 1994. Indiana was added as a Reservation State in 1995.)

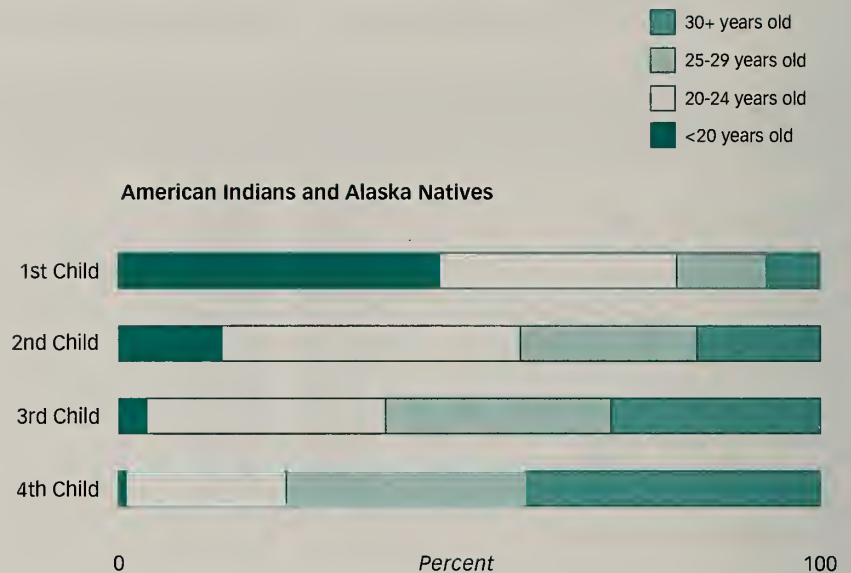
**Source:** U.S. Bureau of the Census, Minority Economic Profiles, July 24, 1992, Tables CPH-L-92, 93, 94, and unpublished data from the U.S. Bureau of the Census.



### CHART 3.1

#### Birth Order by Age of Mother, Percent Within Birth Order, American Indians and Alaska Natives

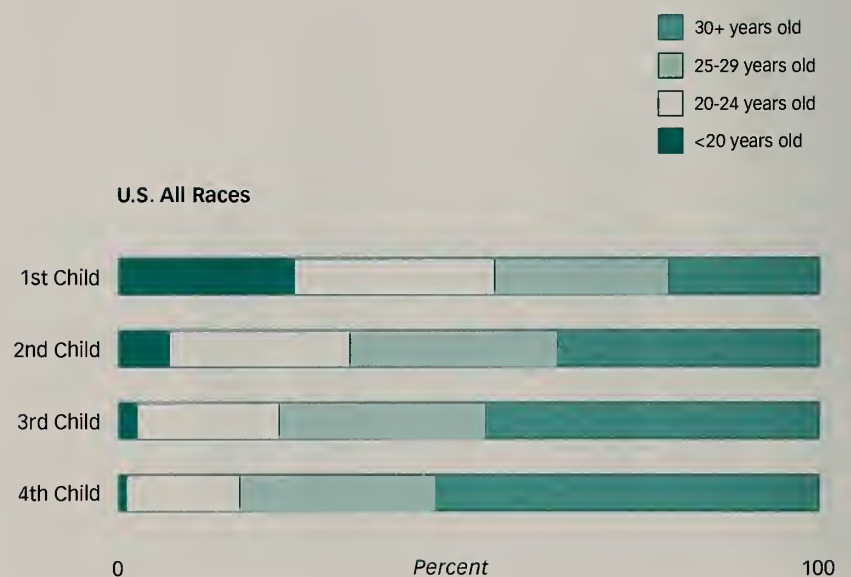
The number of teenage mothers is a concern in the Indian community. For the Indian population, 45.7 percent of mothers having their first child are under age 20. The percentage of mothers under age 20 is still relatively high for Indians having their second (14.7) and third (4.0) child.



### CHART 3.2

#### Birth Order by Age of Mother, Percent Within Birth Order, U.S. All Races

Teenage pregnancy is also a problem for the general population, but to a lesser degree than in the Indian population. For U.S. All Races mothers having their first child, 24.9 percent are under age 20. For the second child this percentage is 7.1, and for the third child it is 2.5.



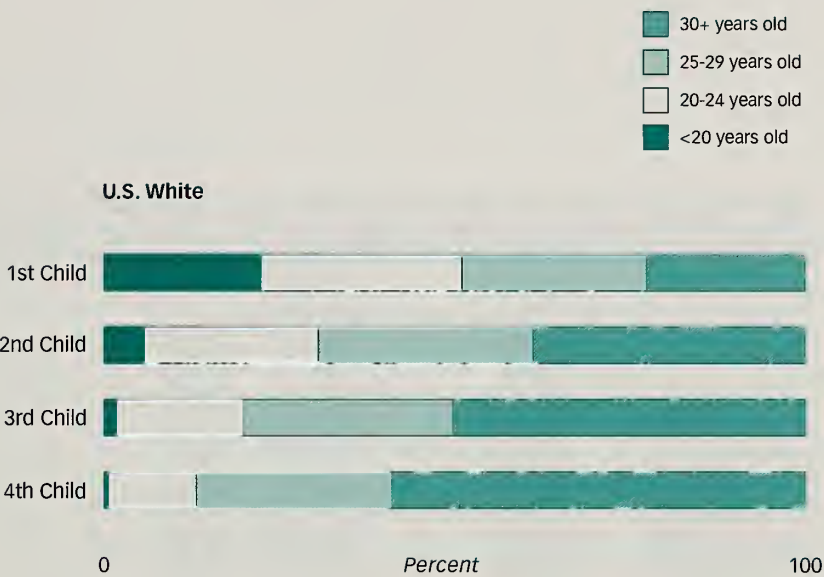




**CHART 3.3**

**Birth Order by Age of Mother,  
Percent Within Birth Order,  
U.S. White**

The U.S. White population is not far behind the general population in terms of teenage pregnancy levels. The percentage of U.S. White mothers under age 20 having their first child is 22.3. The percentages for the second child and the third child are 5.7 and 1.7, respectively.





**TABLE 3**

**Number and Percent Distribution of Live Births**

**By Age of Mother Within Birth Order**

Age Group	Live Birth Order						
	Total Live Births	1st Child	2nd Child	3rd Child	4th Child	5th Child	6th+ Child
<b>American Indian and Alaska Native, IHS Service Area, 1994-1996</b>							
All Ages	98,683 <sup>1</sup>	35,422	26,166	17,182	9,675	5,179	5,059
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	21.2	45.7	14.7	4.0	1.0	0.3	0.0
20-24 years	32.4	33.8	42.5	34.0	22.8	12.8	4.3
25-29 years	23.2	12.8	25.2	32.1	34.3	34.1	23.7
30-34 years	15.3	5.6	12.8	20.8	27.7	32.5	36.9
35-39 years	6.5	1.8	4.1	7.7	12.1	16.5	27.3
40-49 years	1.4	0.3	0.7	1.4	2.1	3.8	7.8
<b>U.S. All Races, 1995</b>							
All Ages	3,871,709 <sup>2</sup>	1,610,453	1,243,433	617,755	237,647	89,463	72,958
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	13.1	24.9	7.1	2.5	1.0	0.3	0.1
20-24 years	24.8	28.6	25.8	20.3	16.2	11.9	5.1
25-29 years	27.3	24.9	29.6	29.5	28.0	26.1	19.7
30-34 years	23.2	15.5	26.2	31.0	32.6	33.2	33.0
35-39 years	9.8	5.2	9.8	14.4	18.6	22.8	30.1
40-49 years	1.8	0.9	1.5	2.3	3.6	5.7	12.0
<b>U.S. White, 1995</b>							
All Ages	3,076,929 <sup>3</sup>	1,287,470	1,008,994	491,536	179,355	62,725	46,849
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	11.5	22.3	5.7	1.7	0.5	0.2	0.1
20-24 years	24.0	28.7	24.8	18.1	12.6	7.8	3.0
25-29 years	28.1	26.3	30.6	30.0	27.9	24.5	15.7
30-34 years	24.4	16.3	27.4	32.8	35.0	35.8	32.9
35-39 years	10.2	5.5	10.0	15.1	20.2	25.4	34.2
40-49 years	1.8	0.9	1.5	2.3	3.8	6.3	14.1

<sup>1</sup> Excludes 340 American Indian and Alaska Native births (0.3 percent) with birth order not reported.

<sup>2</sup> Excludes 27,880 U.S. All Races births (0.7 percent) with birth order not reported.

<sup>3</sup> Excludes 21,956 U.S. All Races White births (0.7 percent) with birth order not reported.

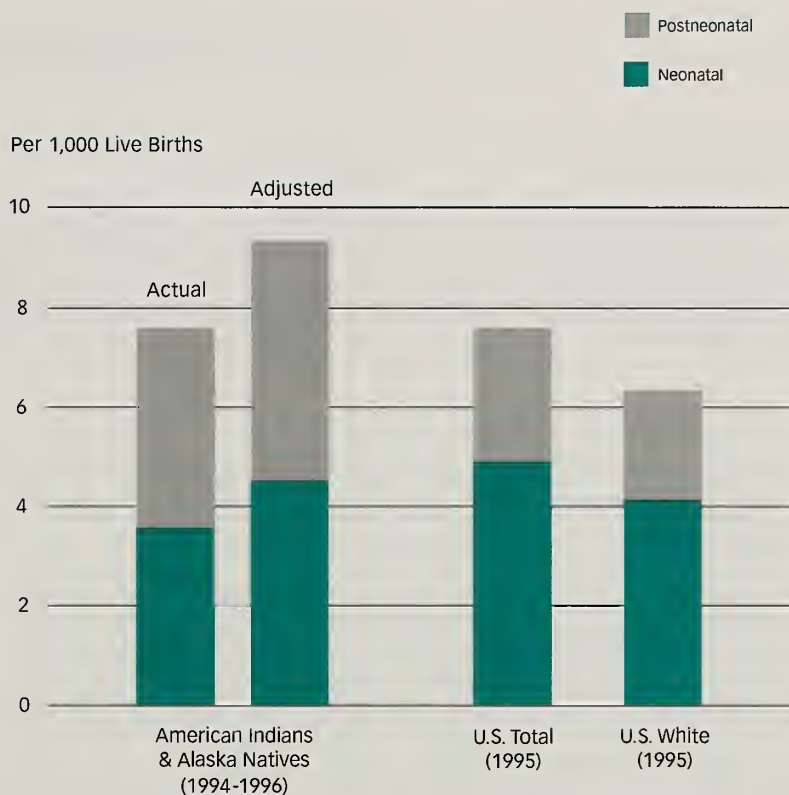
**Note:** 0.0 Rounds to zero. Where needed percents were adjusted to sum to 100.0 due to rounding



## CHART 4

### Infant Mortality Rates by Age

The Indian infant mortality rate of 9.3 deaths per 1,000 live births is 22 percent higher than the U.S. All Races rate (7.6) and 48 percent higher than the U.S. White rate (6.3). However, the Indian population has a different type distribution of infant deaths by age compared to these U.S. population groups. The Indian postneonatal mortality rate is 7 percent greater than the Indian neonatal mortality rate. In contrast, for the U.S. All Races and White populations, the neonatal rates are greater than the postneonatal rates — for U.S. All Races, 81 percent greater and for Whites, 86 percent greater. These Indian rates are adjusted for misreporting of Indian race on state death certificates.





**TABLE 4**

(Rate per 1,000 Live Births)

**Infant Mortality  
Rates by Age**

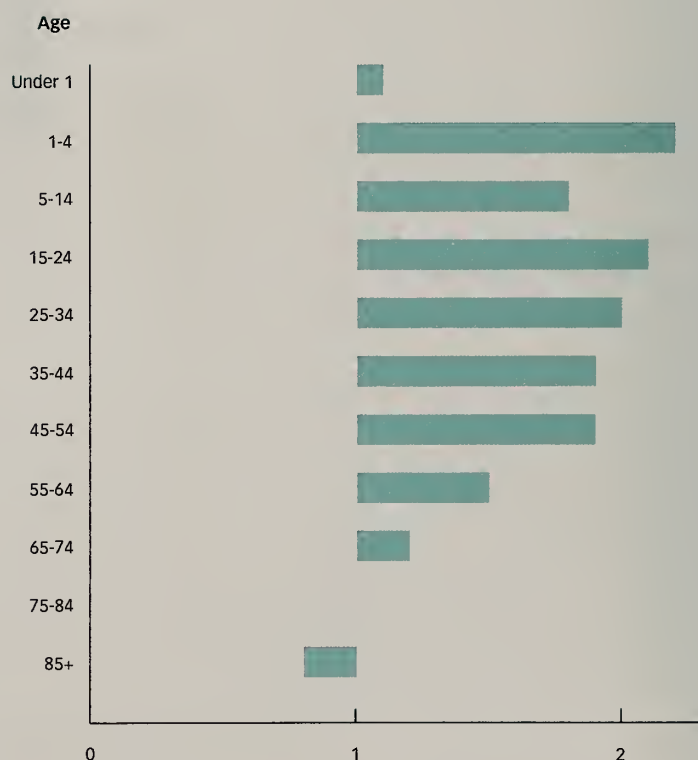
American Indians  
and Alaska Natives,  
IHS Service Area,  
1994-1996 and U.S.  
All Races and White  
Populations, 1995

	Infant Mortality Rates		Neonatal Under 28 Days		Postneonatal 28 Days-11 Months	
	Actual	Adj	Actual	Adj	Actual	Adj
American Indian and Alaska Native	7.6	9.3	3.6	4.5	4.0	4.8
U.S. All Races	7.6	4.9	2.7			
U.S. White	6.3	2.2				

Adj—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of Indian race on death certificates.

**CHART 5****Age-Specific Death Rates,  
Ratio of Indians and Alaska Natives  
(1994-1996) to U.S. All Races (1995)**

Indian youth die at considerably greater rates than youth in the general population. The age-specific death rate for Indians in the age group 1 to 4 years (91.3 deaths per 100,000 population) is 2.2 times the corresponding rate for U.S. All Races (40.6) and 2.6 times the rate for U.S. Whites (35.1). For 5 to 14 year old persons, the Indian rate (41.4) is 1.8 and 2.0 times the rates for the U.S. All Races (22.5) and White (20.6) populations, respectively. The gap for the 15 to 24 year old age group is similar to the one for 1 to 4 year old children; the Indian to U.S. All Races ratio is 2.1 to 1 and Indian to White is 2.3 to 1. These Indian rates are adjusted for misreporting of Indian race on state death certificates.





**TABLE 5****Age-Specific Death Rates**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and Selected U.S. Populations, 1995  
(Rate per 100,000 Population)

Age Group	American Indian & Alaska Native				U.S. Rate			Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number		Rate		All Races	White	Black	U.S. All Races	U.S. White
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>					
Under 1	753	922	699.1	856.0	768.8	646.5	1,467.9	1.1	1.3
1-4	297	353	76.8	91.3	40.6	35.1	70.3	2.2	2.6
5-14	329	366	37.2	41.4	22.5	20.6	33.4	1.8	2.0
15-24	1,191	1,433	163.3	196.5	95.3	84.3	159.8	2.1	2.3
25-34	1,712	2,003	246.2	288.0	141.3	121.5	284.9	2.0	2.4
35-44	2,136	2,432	409.4	466.2	240.8	207.0	511.3	1.9	2.3
45-54	2,453	2,798	754.1	860.2	460.1	413.0	915.3	1.9	2.1
55-64	3,132	3,616	1,400.9	1,617.4	1,114.5	1,049.1	1,823.2	1.5	1.5
65-74	4,032	4,629	2,777.2	3,188.5	2,563.5	2,495.3	3,568.2	1.2	1.3
75-84	3,705	4,252	5,291.6	6,072.9	5,851.8	5,801.4	6,911.1	1.0	1.0
85+	2,390	2,487	12,207.0	12,702.4	15,469.5	15,616.3	14,413.3	0.8	0.8

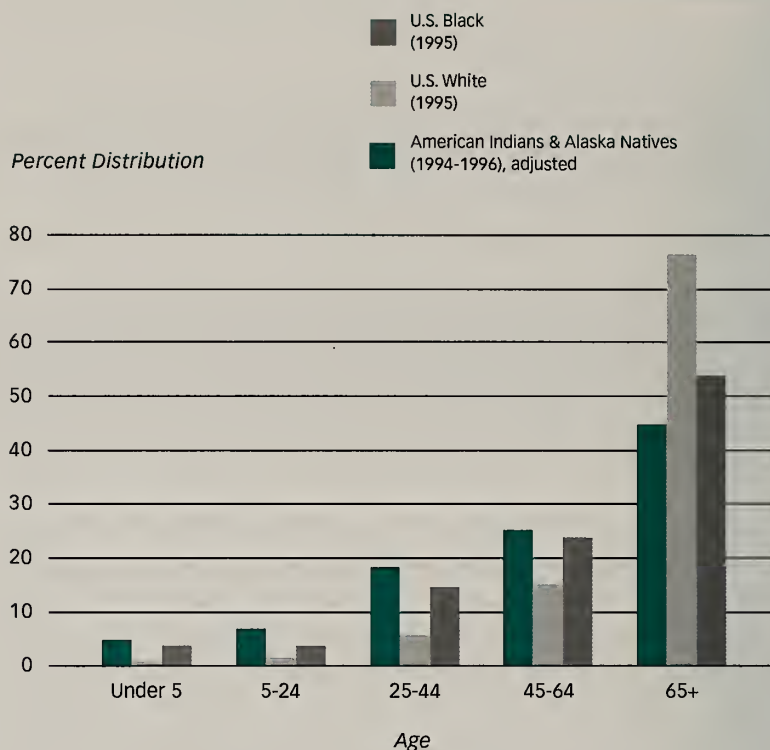
<sup>1</sup>Adjusted to compensate for misreporting of Indian race on death certificates.



**CHART 6.1**

**Deaths by Age and Race**

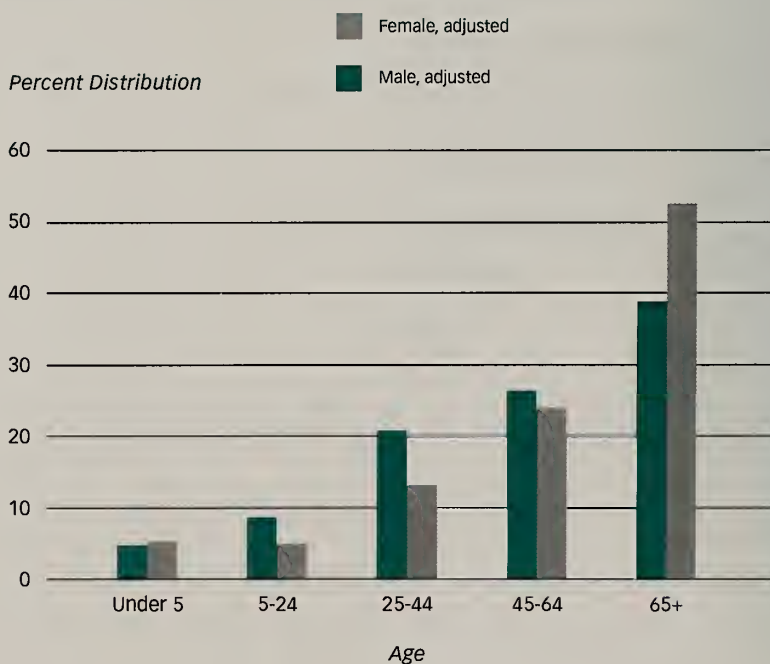
Indians die at relatively younger ages than the general population. Six percent of Indian deaths pertain to ages under 15, and 12 percent of deaths pertain to ages under 25. For the U.S. All Races population, these percentages are 2 and 4, and for U.S. Whites they are 1 and 2. These Indian rates are adjusted for misreporting of Indian race on state death certificates.



**CHART 6.2**

**Deaths by Age and Sex, Indians and Alaska Natives (1994-1996)**

Indian males under 25 years die at relatively younger ages than Indian females. The percentage of deaths pertaining to ages under 15 is similar for Indian males (6 percent) and females (7 percent). However, when the age group is expanded to under 25, the male percentage jumps to 14 compared to the female percentage of 10. These Indian rates are adjusted for misreporting of Indian race on state death certificates.





**TABLE 6****Number and Percent Distribution of Deaths by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and Selected U.S. Populations, 1995

American Indian and Alaska Native												
Age Group	Both Sexes				Male				Female			
	Number		Percent		Number		Percent		Number		Percent	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Ages	22,143	25,304	100.0	100.0	12,452	14,185	100.0	100.0	9,691	11,119	100.0	100.0
Under 1 year	753	922	3.4	3.6	395	492	3.2	3.5	358	430	3.7	3.9
1 to 4	297	353	1.3	1.4	166	197	1.3	1.4	131	156	1.4	1.4
5 to 14	329	366	1.5	1.4	195	216	1.6	1.5	134	150	1.4	1.3
15 to 24	1,191	1,433	5.4	5.7	895	1,029	7.2	7.3	296	404	3.1	3.6
25 to 34	1,712	2,003	7.7	7.9	1,208	1,368	9.7	9.6	504	635	5.2	5.7
35 to 44	2,136	2,432	9.6	9.6	1,436	1,597	11.5	11.3	700	835	7.2	7.5
45 to 54	2,453	2,798	11.1	11.1	1,496	1,683	12.0	11.9	957	1,115	9.9	10.0
55 to 64	3,132	3,616	14.1	14.3	1,807	2,072	14.5	14.6	1,325	1,544	13.7	13.9
65 to 74	4,032	4,629	18.2	18.3	2,164	2,489	17.4	17.5	1,868	2,140	19.3	19.2
75 to 84	3,705	4,252	16.7	16.8	1,781	2,079	14.3	14.7	1,924	2,173	19.9	19.5
85 and over	2,390	2,487	10.8	9.8	900	954	7.2	6.7	1,490	1,533	15.4	13.8
Age not stated	13	13	0.1	0.1	9	9	0.1	0.1	4	4	0.0	0.0

United States			
Age Group	All Races	White	Black
Number of Deaths,			
All Ages	2,312,132	1,987,437	286,401
Percent Distribution,			
All Ages	100.0	100.0	100.0
Under 1	1.3	0.6	3.2
1 to 4	0.3	0.2	0.6
5 to 14	0.4	0.3	0.7
15 to 24	1.5	1.2	3.0
25 to 34	2.5	2.0	5.4
35 to 44	4.4	3.7	9.2
45 to 54	6.2	5.5	10.3
55 to 64	10.2	9.6	13.5
65 to 74	20.8	20.9	20.1
75 to 84	28.2	29.5	20.0
85 and over	24.3	26.0	13.8
Age not stated	0.0	0.0	0.0

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

Note: 0.0 rounds to zero.



## CHART 7.1

### Leading Causes of Infant Deaths (Births to Under 1 Year)

The top two leading causes of Indian infant deaths are sudden infant death syndrome and congenital anomalies. These Indian rates are adjusted for misreporting of Indian race on state death certificates. For the U.S. White population, the order is reversed. For the U.S. All Races population, the leading causes are congenital anomalies and disorders relating to short gestation and low birthweight.

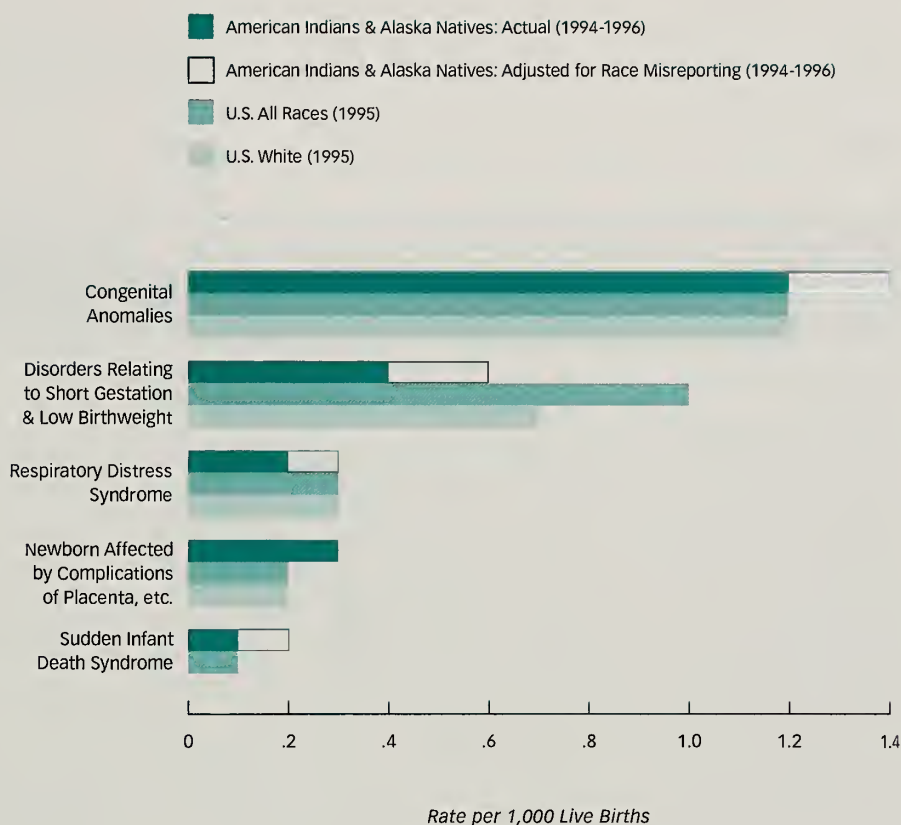




## CHART 7.2

### Leading Causes of Neonatal Deaths (Under 28 Days)

The top two leading causes of Indian neonatal deaths are congenital anomalies and disorders relating to short gestation and low birthweight. These Indian rates are adjusted for misreporting of Indian race on state death certificates. These are also the top two leading causes for the U.S. All Races and White populations.





### CHART 7.3

#### Leading Causes of Postneonatal Deaths (28 Days to Under 1 Year)

The top two leading causes of Indian postneonatal deaths are sudden infant death syndrome and congenital anomalies. These Indian rates are adjusted for misreporting of Indian race on state death certificates. These are also the top two leading causes for the U.S. All Races and White populations.

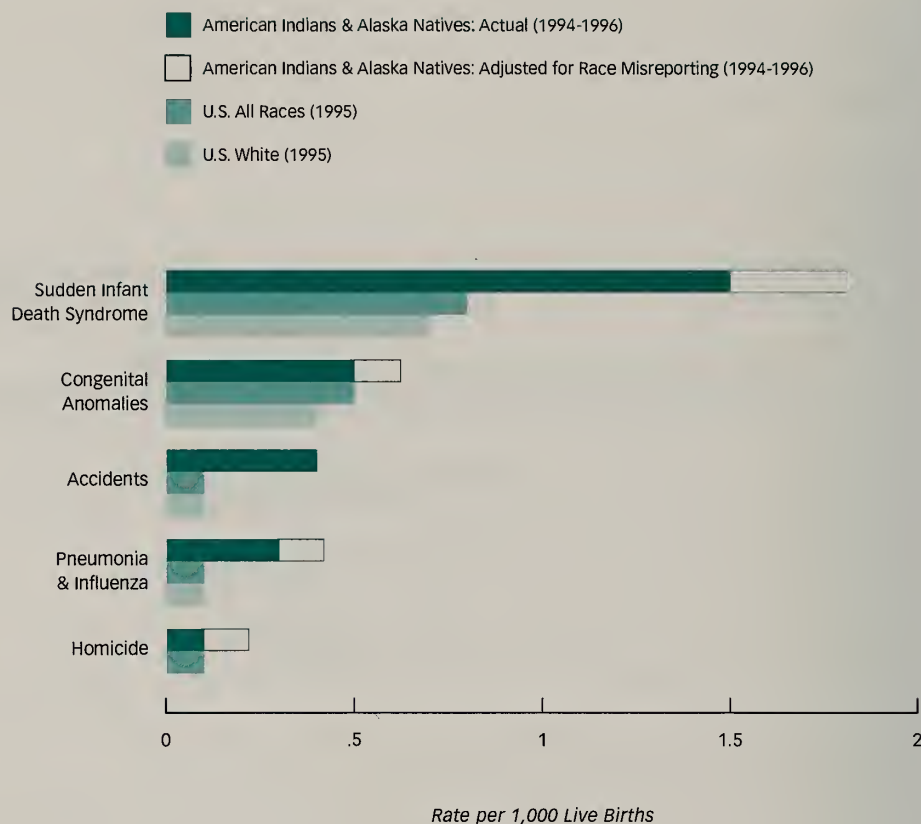




TABLE 7

## Leading Causes of Infant Deaths by Age

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and Selected U.S. Populations, 1995  
(Rate per 1,000 Live Births)

Cause of Death	American Indian & Alaska Native		U.S.		U.S.		Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number	Rate	Actual	Adj <sup>1</sup>	All Races	White	U.S.	U.S.
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Rate	Rate	All Races	White
<b>Total Infant Deaths</b>								
All Causes	753	922	7.6	9.3	7.6	6.3	1.2	1.5
Sudden infant death syndrome	166	202	1.7	2.0	0.9	0.7	2.2	2.9
Congenital anomalies	168	196	1.7	2.0	1.7	1.6	1.2	1.3
Disorders relating to short gestation and low birth weight	43	57	0.4	0.6	1.0	0.7	0.6	0.9
Accidents	39	43	0.4	0.4	0.2	0.2	2.0	2.0
Pneumonia and influenza	32	39	0.3	0.4	0.1	0.1	4.0	4.0
Respiratory distress syndrome	24	35	0.2	0.4	0.4	0.3	1.0	1.3
Newborn affected by complications of placenta, cord, & membranes	28	30	0.3	0.3	0.2	0.2	1.5	1.5
Newborn affected by maternal complications of pregnancy	12	19	0.1	0.2	0.3	0.3	0.7	0.7
Homicide	11	16	0.1	0.2	0.1	0.1	2.0	2.0
Infections specific to the perinatal period	10	14	0.1	0.1	0.2	0.2	0.5	0.5
All other causes	220	271						
<b>Neonatal Deaths</b>								
All Causes	360	449	3.6	4.5	4.9	4.1	0.9	1.1
Congenital anomalies	118	134	1.2	1.4	1.2	1.2	1.2	1.2
Disorders relating to short gestation and low birth weight	43	57	0.4	0.6	1.0	0.7	0.6	0.9
Respiratory distress syndrome	21	32	0.2	0.3	0.3	0.3	1.0	1.0
Newborn affected by complications of placenta, cord, & membranes	28	30	0.3	0.3	0.2	0.2	1.5	1.5
Sudden infant death syndrome	13	20	0.1	0.2	0.1	0.0	2.0	*
Newborn affected by maternal complications of pregnancy	12	19	0.1	0.2	0.3	0.3	0.7	0.7
Infections specific to the perinatal period	10	14	0.1	0.1	0.2	0.2	0.5	0.5
Intrauterine hypoxia and birth asphyxia	7	11	0.1	0.1	0.1	0.1	1.0	1.0
Newborn affected by maternal conditions which may be unrelated to present pregnancy	7	6	0.1	0.1	0.0	0.0	*	*
Pneumonia and influenza	4	4	0.0	0.0	0.0	0.0	*	*
All other causes	97	122						
<b>Postneonatal Deaths</b>								
All Causes	393	473	4.0	4.8	2.7	2.2	1.8	2.2
Sudden infant death syndrome	153	182	1.5	1.8	0.8	0.7	2.3	2.6
Congenital anomalies	50	62	0.5	0.6	0.5	0.4	1.2	1.5
Accidents	37	41	0.4	0.4	0.1	0.1	4.0	4.0
Pneumonia and influenza	28	35	0.3	0.4	0.1	0.1	4.0	4.0
Homicide	10	15	0.1	0.2	0.1	0.0	2.0	*
Septicemia	9	10	0.1	0.1	0.1	0.0	1.0	*
Bronchitis and bronchiolitis	7	8	0.1	0.1	0.0	0.0	*	*
Meningitis	5	5	0.1	0.1	0.0	0.0	*	*
Respiratory distress syndrome	3	3	0.0	0.0	0.0	0.0	*	*
Viral diseases	3	3	0.0	0.0	0.0	0.0	*	*
All other causes	88	109						

<sup>1</sup>Adjusted to compensate for misreporting of Indian race on death certificates.

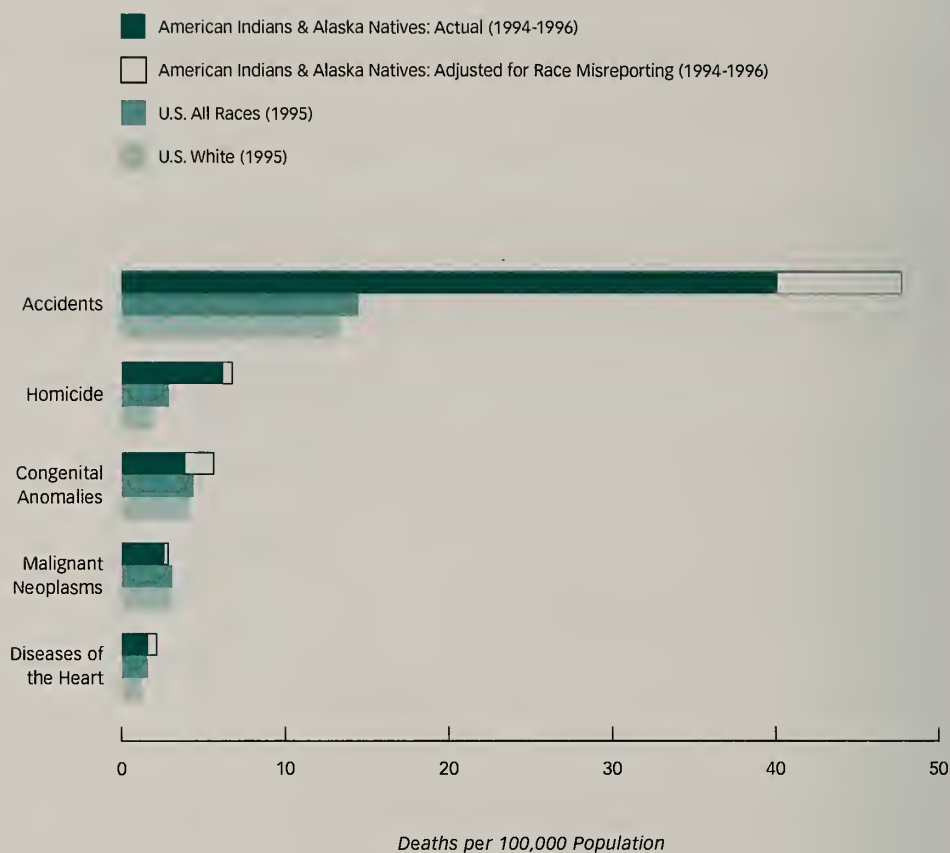
**Note:** 0.0 Rounds to zero. \* Not applicable. Causes of death are listed based upon the order of adjusted number of deaths



## CHART 8

### Death Rates, Leading Causes: Ages 1 to 4

Accidents is the leading cause of death among youth, ages 1 to 4, for the Indian and U.S. All Races and White populations. Homicide is the second leading cause of death for Indian youth in this age group. For U.S. All Races and White youth, ages 1 to 4, the second leading cause of death is congenital anomalies. These Indian rates are adjusted for misreporting of Indian race on state death certificates.





**TABLE 8****Ten Leading Causes of Death for Decedents 1 to 4 Years of Age**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native Number		Rate		U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	297	353	76.8	91.3	40.6	35.1	2.2	2.6
Accidents	155	183	40.1	47.4	14.5	13.3	3.3	3.6
Motor vehicle	69	76	17.9	19.7	5.2	4.9	3.8	4.0
Other accidents	86	107	22.3	27.7	9.2	8.4	3.0	3.3
Homicide and legal intervention	24	25	6.2	6.5	2.9	1.9	2.2	3.4
Congenital anomalies	15	22	3.9	5.7	4.4	4.1	1.3	1.4
Malignant neoplasms	10	11	2.6	2.8	3.1	3.1	0.9	0.9
Diseases of the heart	6	8	1.6	2.1	1.6	1.2	1.3	1.8
Pneumonia and influenza	6	7	1.6	1.8	1.0	0.7	1.8	2.6
Certain conditions originating in the perinatal period	5	7	1.3	1.8	0.6	0.4	3.0	4.5
Chronic obstructive pulmonary diseases and allied conditions	3	3	0.8	0.8	0.2	0.2	4.0	4.0
Acute bronchitis and bronchiolitis	2	3	0.5	0.8	0.2	0.1	4.0	8.0
Cerebrovascular diseases	2	3	0.5	0.8	0.4	0.3	2.0	2.7
All other causes	69	81						

<sup>1</sup>Adjusted to compensate for misreporting of Indian race on death certificates.

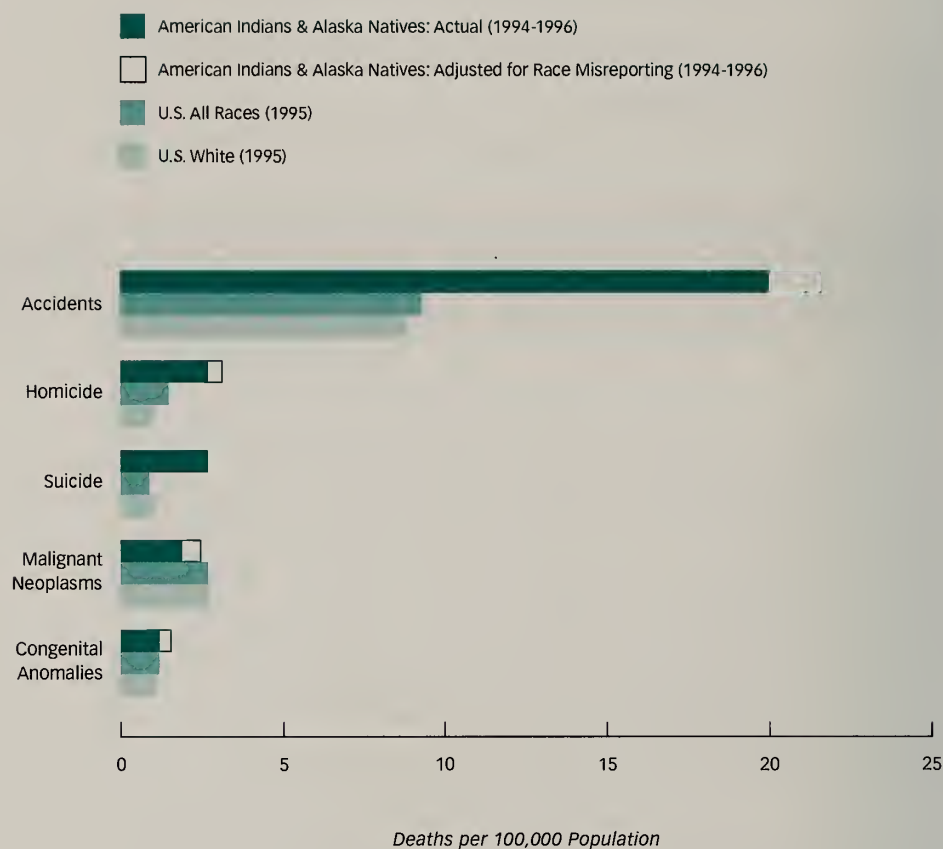
**Note:** Causes of death are listed based upon the order of adjusted number of deaths



## CHART 9

### Death Rates, Leading Causes: Ages 5 to 14

Accidents is the leading cause of death for the 5 to 14 year old age group among the Indian, U.S. All Races, and White populations. Homicide is the second leading cause of death for Indian youth in this age group. Malignant neoplasms is the second leading cause of death for this age group for U. S. All Races and White youth. These Indian rates are adjusted for misreporting of Indian race on state death certificates.





**TABLE 9****Ten Leading Causes of Death for Decedents 5 to 14 Years of Age**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native Number		Rate		U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	329	366	37.2	41.4	22.5	20.6	1.8	2.0
Accidents	177	191	20.0	21.6	9.3	8.8	2.3	2.5
Motor vehicle	94	103	10.6	11.7	5.4	5.3	2.2	2.2
Other accidents	83	88	9.4	10.0	3.9	3.5	2.6	2.9
Homicide and legal intervention	24	29	2.7	3.3	1.5	1.0	2.2	3.3
Suicide	24	24	2.7	2.7	0.9	1.0	3.0	2.7
Malignant neoplasms	17	22	1.9	2.5	2.7	2.7	0.9	0.9
Congenital anomalies	11	14	1.2	1.6	1.2	1.1	1.3	1.5
Diseases of the heart	6	9	0.7	1.0	0.8	0.6	1.3	1.7
Pneumonia and influenza	6	9	0.7	1.0	0.3	0.3	3.3	3.3
Septicemia	4	4	0.5	0.5	0.1	0.1	5.0	5.0
Chronic obstructive pulmonary diseases and allied conditions	3	4	0.3	0.5	0.4	0.2	1.3	2.5
Meningoccal infection	3	3	0.3	0.3	0.1	0.1	3.0	3.0
All other causes	54	57						

<sup>1</sup>Adjusted to compensate for misreporting of Indian race on death certificates.

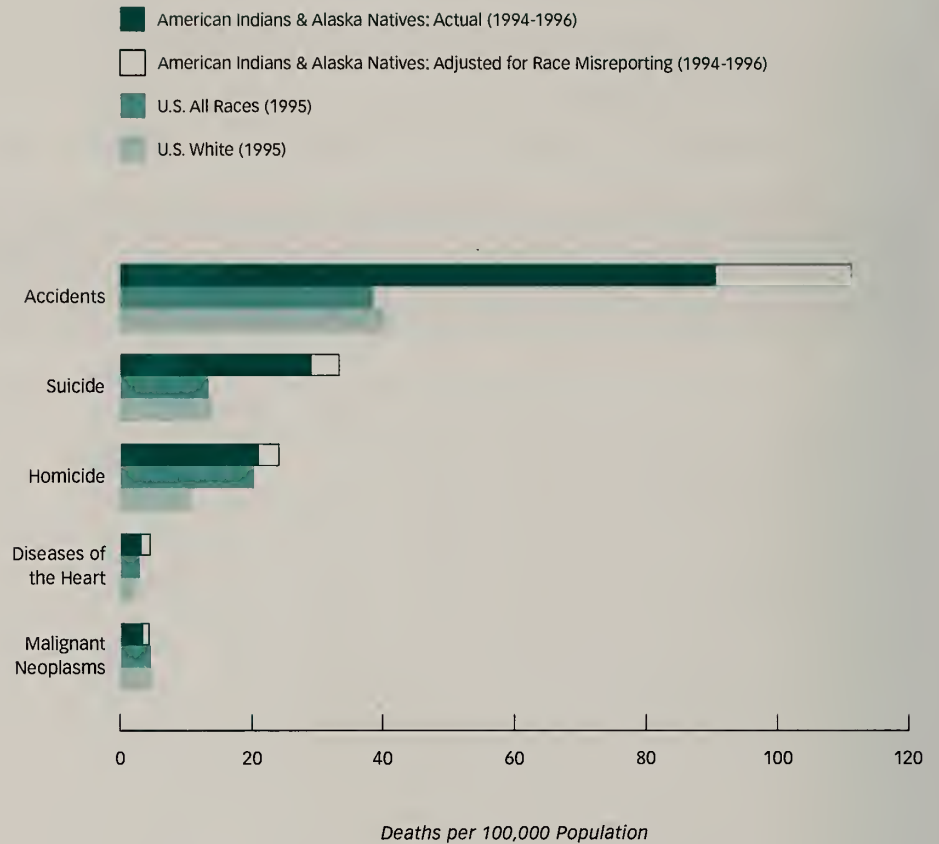
**Note:** Causes of death are listed based upon the order of adjusted number of deaths



## CHART 10

### Death Rates, Leading Causes: Ages 15 to 24

As it is for the 1 to 14 year age groups, accidents is the leading cause of death for Indians, U.S. All Races, and U.S. Whites aged 15 to 24 years. The second and third leading causes for this age group for Indians and Whites are suicide and homicide. For the U.S. All Races population, the order is reversed. These Indian rates are adjusted for misreporting of Indian race on state death certificates.





**TABLE 10****Ten Leading Causes of Death for Decedents 15 to 24 Years of Age**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native Number		Rate		U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	1,191	1,433	163.3	196.5	95.3	84.3	2.1	2.3
Accidents	661	817	90.6	112.0	38.5	40.2	2.9	2.8
Motor vehicle	500	629	68.6	86.2	29.5	31.1	2.9	2.8
Other accidents	161	188	22.1	25.8	9.0	9.1	2.9	2.8
Suicide	212	247	29.1	33.9	13.4	14.0	2.5	2.4
Homicide and legal intervention	153	176	21.0	24.1	20.3	10.5	1.2	2.3
Diseases of the heart	23	31	3.2	4.3	2.9	2.2	1.5	2.0
Malignant neoplasms	25	28	3.4	3.8	4.6	4.6	0.8	0.8
Congenital anomalies	6	7	0.8	1.0	1.3	1.2	0.8	0.8
Cerebrovascular diseases	5	5	0.7	0.7	0.5	0.4	1.4	1.8
Pneumonia and influenza	4	5	0.5	0.7	0.6	0.5	1.2	1.4
Human immunodeficiency virus (HIV) infection	4	5	0.5	0.7	1.8	1.0	0.4	0.7
Septicemia	4	4	0.5	0.5	0.2	0.2	2.5	2.5
All other causes	94	108						

<sup>1</sup>Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths

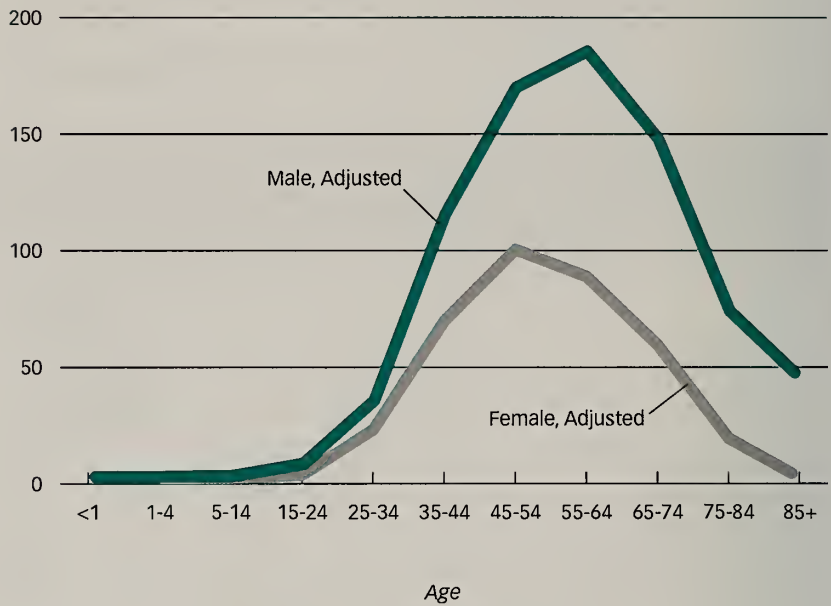


## CHART 11

### Alcoholism Death Rates by Age and Sex, Indians and Alaska Natives (1994-1996)

Alcohol abuse among youth is a serious problem in many Indian communities. The problem is already manifesting itself through alcoholism death rates for Indians 15 to 24 years of age. The Indian rate is 3.4 deaths per 100,000 population compared to 0.3 for the U.S. All Races and White populations of this age group. It is a greater problem for Indian males than for Indian females. The Indian male death rate due to alcoholism for 15 to 24 year old persons is over 5 times the female rate, 5.6 to 1.1. These Indian rates are adjusted for misreporting of Indian race on state death certificates.

Per 100,000 Population





**TABLE 11****Alcoholism Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	0.2	0.2	0.4	0.4	—	—
15-24 years	3.2	3.4	5.4	5.6	0.8	1.1
25-34 years	24.0	26.5	30.9	32.6	17.5	20.6
35-44 years	76.7	89.1	99.9	112.6	54.9	67.2
45-54 years	109.8	131.0	143.9	167.1	78.4	97.8
55-64 years	109.6	131.1	151.9	182.6	72.8	86.2
65-74 years	84.0	95.7	126.2	144.9	50.6	56.8
75-84 years	34.3	38.6	60.4	71.0	16.7	16.7
85 years +	15.3	15.3	41.8	41.8	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	0.1	0.1	0.1
1-4 years	—	—	—
5-14 years	0.0	0.0	0.0
15-24 years	0.3	0.5	0.1
25-34 years	2.1	3.0	1.1
35-44 years	9.8	14.8	4.9
45-54 years	17.5	27.9	7.5
55-64 years	22.3	36.4	9.5
65-74 years	19.0	32.6	8.1
75-84 years	11.1	20.8	4.9
85 years +	5.3	12.7	2.4

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	0.1	0.1	0.2
1-4 years	—	—	—
5-14 years	0.0	0.0	—
15-24 years	0.3	0.4	0.1
25-34 years	1.9	2.8	1.0
35-44 years	8.9	13.6	4.1
45-54 years	15.7	25.0	6.6
55-64 years	20.4	33.1	8.6
65-74 years	17.9	30.6	7.6
75-84 years	10.9	20.5	4.8
85 years +	5.0	12.0	2.3

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** — Represents zero. 0.0 rounds to zero.

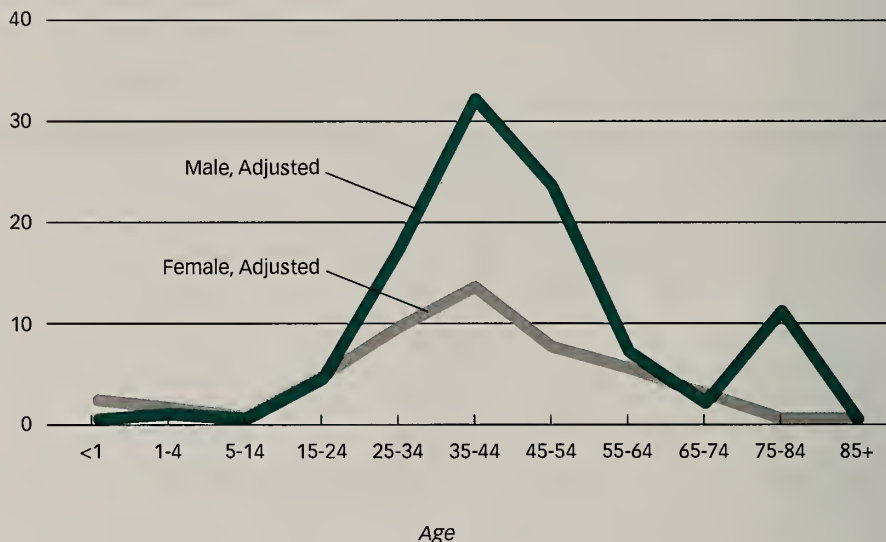


## CHART 12

### Drug-Related Death Rates by Age and Sex, Indians and Alaska Natives (1994-1996)

Drug abuse continues to be a problem among youth of all races. The drug-related death rate for Indians, 15 to 24 years of age, is 4.1 deaths per 100,000 population. This compares to 2.4 for U.S. All Races and 2.5 for U.S. Whites of the same age group. Unlike alcoholism death rates, the Indian female drug-related death rate for this age group is higher than the Indian male rate, 4.2 to 4.0. These Indian rates are adjusted for misreporting of Indian race on state death certificates.

Per 100,000 Population





**TABLE 12****Drug-Related Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	0.9	0.9	—	—	1.9	1.9
1-4 years	0.5	0.8	0.5	0.5	0.5	1.1
5-14 years	0.1	0.1	—	—	0.2	0.2
15-24 years	3.0	4.1	3.5	4.0	2.5	4.2
25-34 years	10.5	12.8	14.4	16.8	6.8	9.0
35-44 years	18.2	22.0	26.6	31.7	10.4	13.0
45-54 years	13.2	14.8	19.9	23.1	7.1	7.1
55-64 years	5.4	5.8	5.8	6.7	5.0	5.0
65-74 years	2.1	2.1	1.6	1.6	2.5	2.5
75-84 years	2.9	4.3	7.1	10.7	—	—
85 years +	—	—	—	—	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	0.6	0.5	0.6
1-4 years	0.2	0.2	0.1
5-14 years	0.1	0.1	0.1
15-24 years	2.4	3.3	1.4
25-34 years	8.3	12.3	4.4
35-44 years	13.5	20.2	7.0
45-54 years	8.1	11.5	5.0
55-64 years	3.3	3.9	2.8
65-74 years	2.3	2.1	2.5
75-84 years	2.7	2.9	2.6
85 years +	4.4	5.9	3.9

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	0.4	0.5	0.3
1-4 years	0.1	0.1	0.1
5-14 years	0.1	0.1	0.1
15-24 years	2.5	3.5	1.5
25-34 years	8.3	12.4	4.2
35-44 years	12.4	18.4	6.3
45-54 years	7.1	9.4	4.8
55-64 years	3.1	3.3	2.8
65-74 years	2.3	2.0	2.6
75-84 years	2.7	2.8	2.6
85 years +	4.6	6.3	4.0

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

Note: — Represents zero.

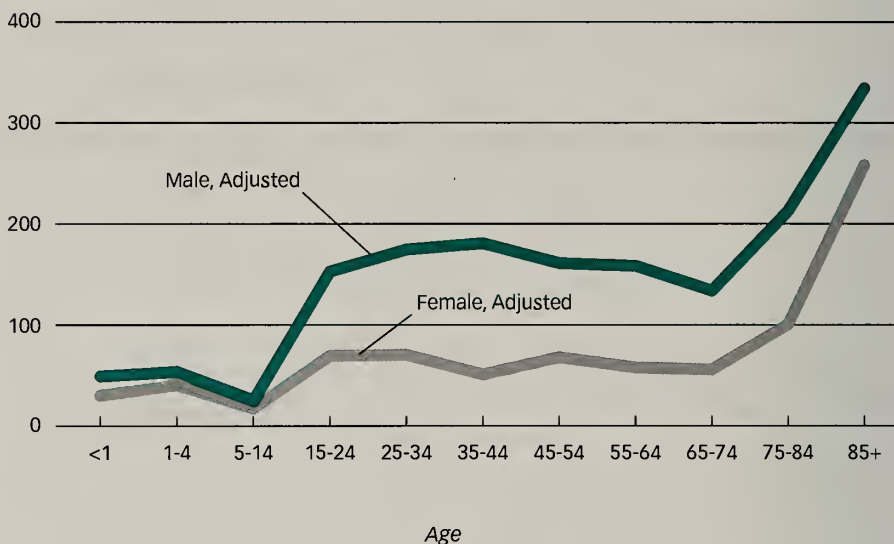


### CHART 13

#### Accident Death Rates by Age and Sex, Indians and Alaska Natives (1994-1996)

Indian youth are much more likely to die from accidents than youth in the general population. The accident death rate for Indians aged 1 to 4 years (47.4 deaths per 100,000 population) is 3.3 and 3.6 times the corresponding rates for the U.S. All Races (14.5) and White (13.3) populations, respectively. For 5 to 14 year old persons, these comparisons yield ratios of 2.3 to 1 (21.6 to 9.4) and 2.5 to 1 (21.6 to 8.8). For 15 to 24 year old persons, these ratios are 2.9 to 1 (112.0 to 38.9) and 2.8 to 1 (112.0 to 40.6). Accidents are a greater problem for Indian males than for Indian females. This disparity increases with age excluding infants; the male to female death rate ratio ranges from 1.3 to 1 for the 1 to 4 age group to 2.2 to 1 for the 15 to 24 age group. These Indian rates are adjusted for misreporting of Indian race on state death certificates.

Per 100,000 Population





**TABLE 13****Accident Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	36.2	39.9	42.3	49.6	30.0	30.0
1-4 years	40.1	47.4	45.3	54.0	34.7	40.5
5-14 years	20.0	21.6	23.8	25.8	16.1	17.3
15-24 years	90.6	112.0	131.4	153.1	48.2	69.2
25-34 years	103.3	121.5	152.2	174.9	56.0	70.4
35-44 years	99.9	113.9	159.7	181.1	43.8	50.9
45-54 years	99.9	112.5	145.2	161.3	58.4	67.8
55-64 years	97.1	104.7	147.1	158.6	53.5	57.7
65-74 years	87.5	90.2	127.7	134.0	55.6	55.6
75-84 years	134.3	145.7	191.8	213.1	95.6	100.3
85 years +	286.0	286.0	334.5	334.5	258.0	258.0

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	20.6	21.5	19.5
1-4 years	14.5	16.9	12.1
5-14 years	9.4	11.8	6.8
15-24 years	38.9	56.8	20.2
25-34 years	33.2	51.0	15.4
35-44 years	33.7	51.4	16.2
45-54 years	30.0	45.3	15.4
55-64 years	32.1	46.0	19.5
65-74 years	45.0	60.1	32.9
75-84 years	98.6	131.0	78.0
85 years +	268.4	368.9	229.2

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	17.4	19.0	15.8
1-4 years	13.3	15.4	11.1
5-14 years	8.8	11.1	6.4
15-24 years	40.6	58.7	21.4
25-34 years	33.0	50.6	15.1
35-44 years	32.2	48.9	15.3
45-54 years	28.1	42.0	14.4
55-64 years	30.4	42.9	18.9
65-74 years	43.5	57.3	32.3
75-84 years	98.0	129.1	78.2
85 years +	274.1	374.0	235.6

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

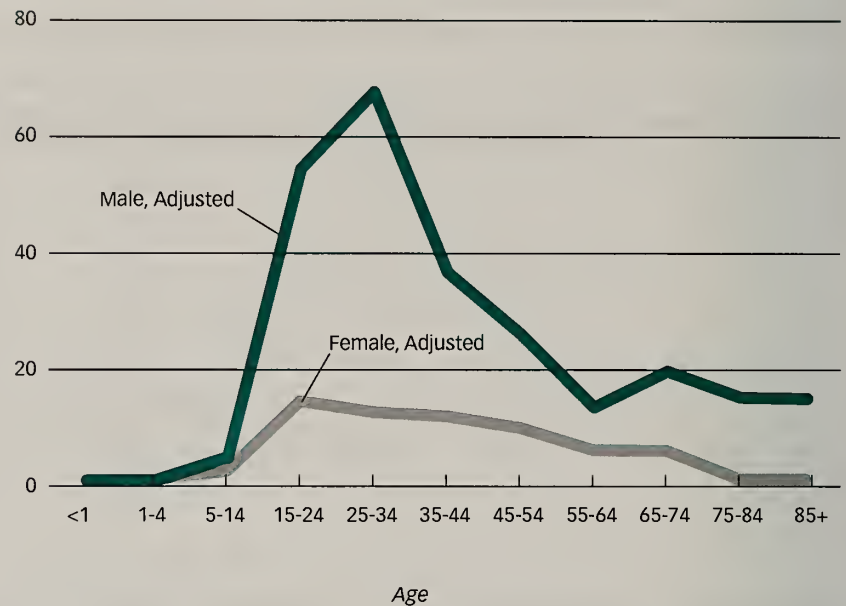


## CHART 14

### Suicide Death Rates by Age and Sex, Indians and Alaska Natives, Calendar Years (1994-1996)

Indian youth, especially Indian males, are committing suicide at a considerably greater rate than youth in the general population. The Indian suicide death rate for 15 to 24 year old persons (33.9 deaths per 100,000 population) is 2.5 and 2.4 times the corresponding rates for the U.S. All Races (13.4) and White (14.0) populations, respectively. This comparison for Indian males versus Indian females yields a high ratio of 4.0 to 1 (53.5 to 13.4). These Indian rates are adjusted for misreporting of Indian race on state death certificates.

Per 100,000 Population







**TABLE 14**

**Suicide Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	2.7	2.7	4.0	4.0	1.4	1.4
15-24 years	29.1	33.9	46.7	53.5	10.6	13.4
25-34 years	33.9	38.5	59.7	66.7	9.3	11.5
35-44 years	21.1	22.8	34.1	35.7	8.9	10.8
45-54 years	15.7	16.6	24.4	25.1	7.7	8.8
55-64 years	8.1	8.5	11.5	12.5	5.0	5.0
65-74 years	10.3	11.0	17.1	18.7	4.9	4.9
75-84 years	5.7	5.7	14.2	14.2	—	—
85 years +	5.1	5.1	13.9	13.9	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	—	—	—
1-4 years	—	—	—
5-14 years	0.9	1.3	0.4
15-24 years	13.4	22.6	3.7
25-34 years	15.4	25.7	5.2
35-44 years	15.3	24.2	6.5
45-54 years	14.6	22.9	6.7
55-64 years	13.3	22.1	5.3
65-74 years	15.8	28.7	5.4
75-84 years	20.8	44.8	5.5
85 years +	21.6	63.1	5.5

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	—	—	—
1-4 years	—	—	—
5-14 years	1.0	1.4	0.4
15-24 years	14.0	23.6	3.9
25-34 years	16.3	26.8	5.5
35-44 years	16.5	25.9	7.2
45-54 years	15.9	24.6	7.4
55-64 years	14.4	23.6	5.8
65-74 years	16.7	30.4	5.7
75-84 years	22.1	47.6	5.8
85 years +	23.0	68.2	5.6

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** — Represents zero.

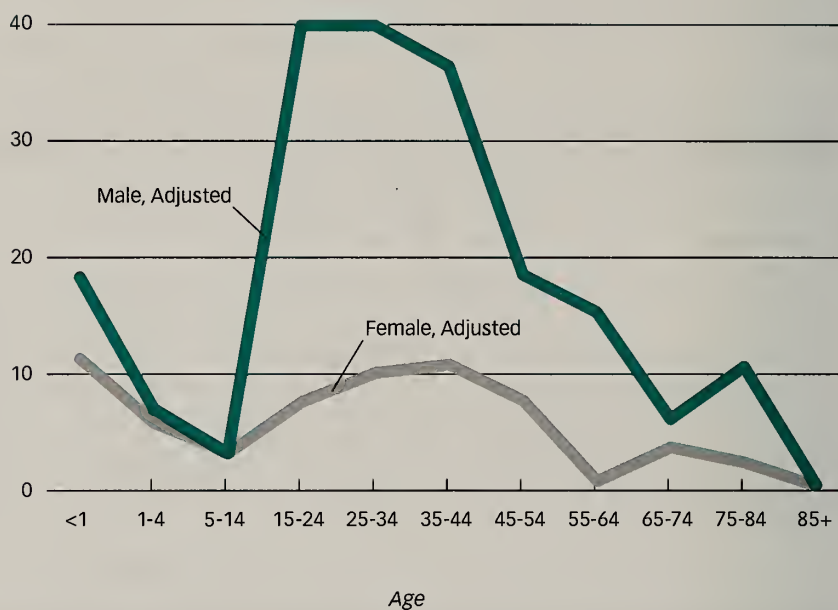


## CHART 15

### Homicide Death Rates by Age and Sex, Indians and Alaska Natives (1994-1996)

Indian youth under 25 years old die from homicide at a greater rate than the general population. The homicide death rate for Indian age groups under 25 years ranges from 1.2 to 2.2 times the corresponding rate for U.S. All Races. Likewise, the Indian rate ranges from 2.3 to 3.4 times the U.S. White rate for these age groups. The Indian male homicide death rate is relatively close to the Indian female rate for ages under 15. However, it is over 5 times the female rate for ages 15 to 24. These Indian rates are adjusted for misreporting of Indian race on state death certificates.

Per 100,000 Population





**TABLE 15****Homicide Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	10.2	14.9	11.0	18.4	9.4	11.3
1-4 years	6.2	6.5	7.1	7.1	5.3	5.8
5-14 years	2.7	3.3	2.7	3.3	2.8	3.2
15-24 years	21.0	24.1	35.2	40.0	6.2	7.6
25-34 years	21.4	24.7	35.0	40.0	8.4	10.1
35-44 years	20.5	23.2	32.9	36.5	8.9	10.8
45-54 years	11.7	12.9	17.3	18.6	6.5	7.7
55-64 years	7.6	7.6	15.4	15.4	0.8	0.8
65-74 years	4.8	4.8	6.2	6.2	3.7	3.7
75-84 years	5.7	5.7	10.7	10.7	2.4	2.4
85 years +	—	—	—	—	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	8.1	8.9	7.2
1-4 years	2.9	3.1	2.6
5-14 years	1.5	1.9	1.0
15-24 years	20.3	34.0	6.1
25-34 years	15.1	23.8	6.5
35-44 years	9.7	14.6	4.9
45-54 years	6.2	9.7	3.0
55-64 years	4.5	7.2	2.1
65-74 years	3.3	4.6	2.2
75-84 years	3.1	3.7	2.7
85 years +	3.3	4.3	2.9

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	6.1	7.1	5.0
1-4 years	1.9	2.1	1.8
5-14 years	1.0	1.3	0.8
15-24 years	10.5	16.6	4.1
25-34 years	8.7	13.0	4.2
35-44 years	6.3	9.2	3.4
45-54 years	4.4	6.4	2.5
55-64 years	3.3	5.0	1.7
65-74 years	2.4	3.2	1.9
75-84 years	2.4	2.5	2.3
85 years +	2.5	3.6	2.1

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

Note: — Represents zero.



## CHART 16

### Pneumonia and Influenza Death Rates by Age and Sex, Indians and Alaska Natives (1994-1996)

Indian youth under age 15 die from pneumonia and influenza at a greater rate than youth in the general population. The pneumonia and influenza death rates for Indian age groups under 15 years ranges from 1.8 to 3.3 times the corresponding rates for U.S. All Races. Likewise, these Indian rates range from 2.6 to 3.6 times the U.S. White rates for these age groups. For 15 to 24 year old persons, the Indian rate (0.7 deaths per 100,000 population) is closer to the All Races rate (0.6) and the White rate (0.5). The Indian male pneumonia and influenza death rate is greater than the Indian female rate for all age groups, except 5 to 24 years. These Indian rates are adjusted for misreporting of Indian race on state death certificates.

Per 100,000 Population





**TABLE 16****Pneumonia and Influenza Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	29.7	36.2	42.3	47.8	16.9	24.4
1-4 years	1.6	1.8	2.0	2.5	1.1	1.1
5-14 years	0.7	1.0	0.4	0.4	0.9	1.4
15-24 years	0.5	0.7	0.3	0.5	0.8	0.8
25-34 years	4.2	5.0	5.9	6.5	2.5	3.7
35-44 years	11.5	12.3	16.3	17.4	7.1	7.4
45-54 years	16.3	17.5	25.1	27.0	8.3	8.8
55-64 years	31.3	33.1	41.3	44.2	22.6	23.4
65-74 years	87.5	95.7	112.2	123.1	67.9	74.1
75-84 years	282.8	315.6	419.1	468.8	191.1	212.6
85 years +	1,302.4	1,338.2	1,324.2	1,380.0	1,289.8	1,314.0
U.S. All Races						
Age Group	Both Sexes		Male		Female	
Under 1 year	12.8		14.3		11.3	
1-4 years	1.0		0.9		1.1	
5-14 years	0.3		0.3		0.4	
15-24 years	0.6		0.6		0.5	
25-34 years	1.5		1.9		1.2	
35-44 years	3.5		4.4		2.6	
45-54 years	6.7		8.7		4.8	
55-64 years	16.4		20.8		12.4	
65-74 years	57.2		75.1		43.0	
75-84 years	233.2		305.4		187.5	
85 years +	1,035.7		1,287.3		937.9	
U.S. White						
Age Group	Both Sexes		Male		Female	
Under 1 year	10.1		11.1		9.0	
1-4 years	0.7		0.6		0.8	
5-14 years	0.3		0.3		0.3	
15-24 years	0.5		0.7		0.4	
25-34 years	1.2		1.5		1.0	
35-44 years	2.8		3.5		2.1	
45-54 years	5.5		6.9		4.2	
55-64 years	14.7		18.3		11.4	
65-74 years	55.0		71.3		41.8	
75-84 years	232.1		302.3		187.3	
85 years +	1,055.5		1,307.5		958.4	

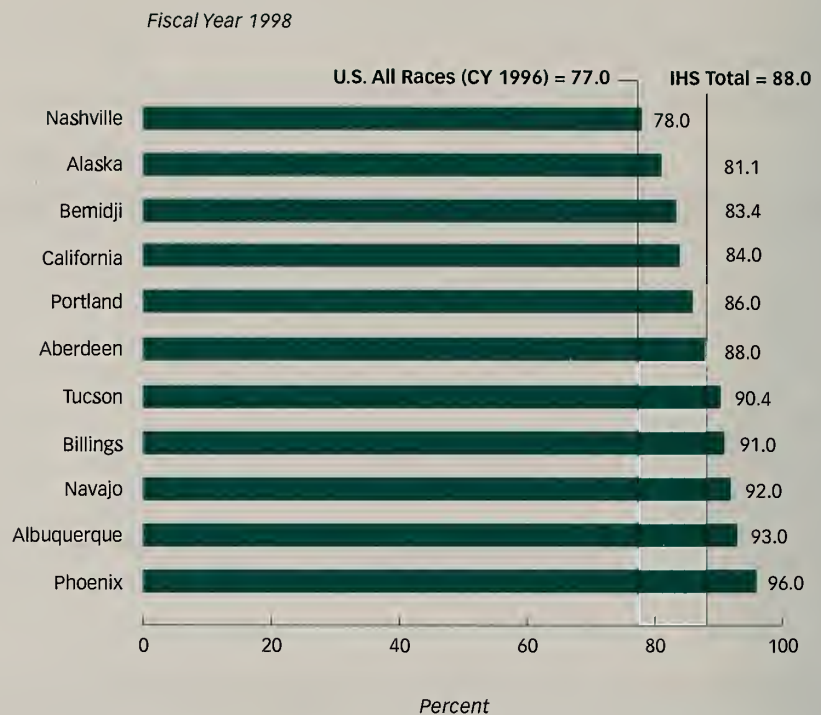
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.



## CHART 17

### Immunization Rates, 0-27 Months, FY 1998

In FY 1998, 88.0 percent of Indian children, 0-27 months, residing in the IHS service area received all required immunizations. In the general population in CY 1996, 77.0 percent of children aged 19 to 35 months received all required immunizations. The Nashville Area had the lowest IHS rate at 78.0 percent, while the Phoenix Area had the highest rate, 96.0.





**TABLE 17**

Population and Rate  
of Immunizations,  
0-27 Months, FY 1998

	Population Immunized	Immunization Rate <sup>1</sup>
U.S. All Races <sup>2</sup>		77.0
All IHS Areas	77,404	88.0
Aberdeen	15,233	88.0
Alaska	3,342	81.1
Albuquerque	7,546	93.0
Bemidji	1,880	83.4
Billings	8,465	91.0
California	5,676	84.0
Nashville	1,298	78.0
Navajo	29,097	92.0
Oklahoma <sup>3</sup>	—	—
Phoenix	1,060	96.0
Portland	2,021	86.0
Tucson	1,786	90.4

<sup>1</sup> Number of children who have completed all required immunizations divided by the service population for the age group.

<sup>2</sup> Vaccination coverage levels among children ages 19-35 months, 1996.

<sup>3</sup> Data not reported to IHS.

**Sources:** US: National Immunization Survey, CDC.

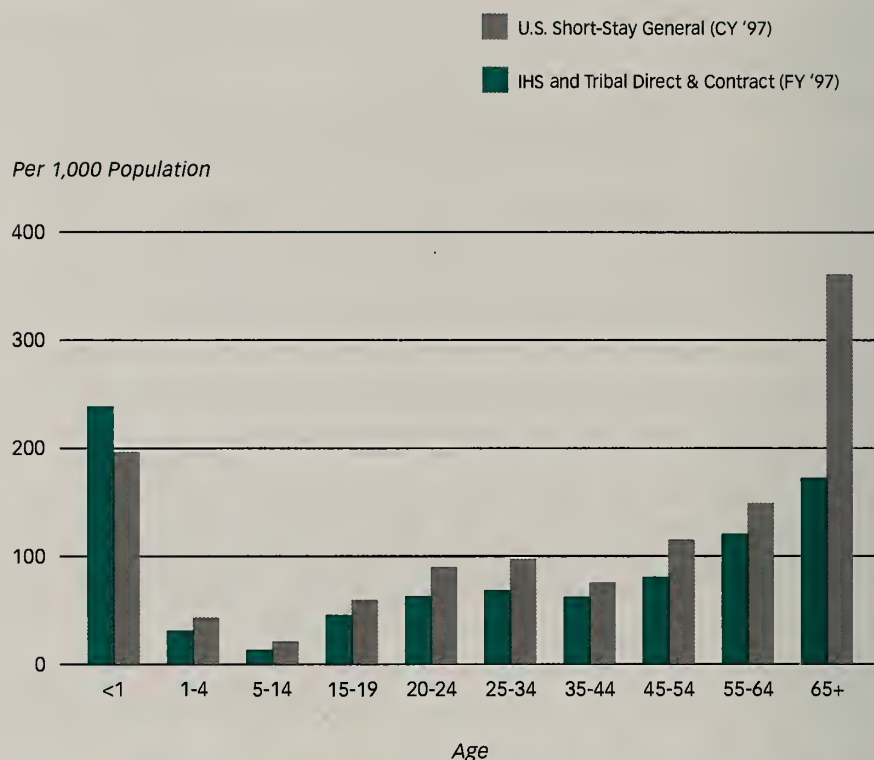
IHS: Area Immunization Coordinators from facility quarterly reports.



## CHART 18

### Hospital Discharge Rates by Age, FY 1997

The IHS hospital (IHS and Tribal direct and contract general hospitals) discharge rate, all ages, is considerably less than the rate for U.S. general short-stay hospitals, i.e., 61.2 discharges per 1,000 population compared to 114.3, or 46 percent less. The rates are somewhat closer for age groups 1 to 19 years; the Indian rate ranges 24 to 37 percent less than the U.S. rate. On the contrary, for persons under 1 year old, the Indian rate is 22 percent greater than the U.S. rate.





**TABLE 18**

Comparison of IHS  
and U.S. Hospital  
Discharge Rates  
by Age, FY 1997

Age of Admission	Discharges per 1,000 Population		Percent Difference IHS Rate to U.S. Rate
	IHS	U.S.	
All Ages	61.2	114.3	-46.4
Under 1 year	238.9	196.6	21.5
1-4 years	31.0	43.3	-28.5
5-14 years	13.3	21.2	-37.1
15-19 years	45.4	59.6	-23.8
20-24 years	63.0	90.1	-30.1
25-34 years	68.3	97.7	-30.1
35-44 years	62.3	75.7	-17.8
45-54 years	80.8	115.4	-30.0
55-64 years	120.6	149.1	-19.1
65 years and over	172.3	361.1	-52.3

**Note:** IHS discharge rates were calculated using the IHS FY 1997 user population.

**Sources:** IHS: Annual reports 2C and 3I

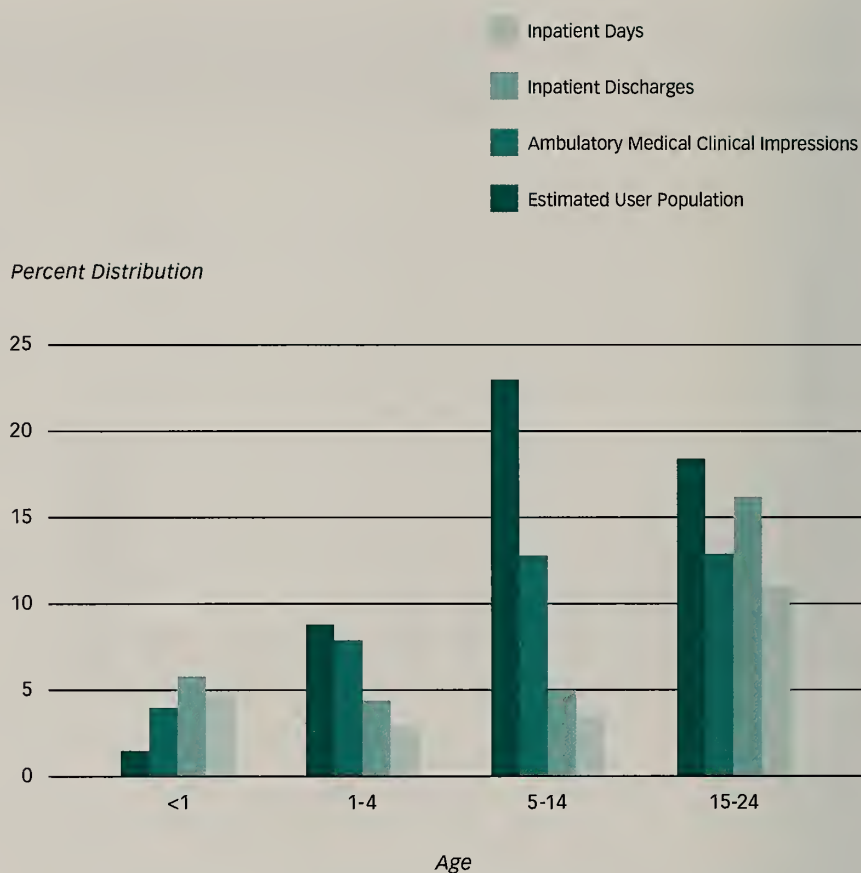
U.S.: Utilization of Short-Stay Hospitals, Annual Summary of the U.S., NCHS



## CHART 19.1

### Percent Distributions for Population and Patient Care Workloads, FY 1997

Indian children under 1 year of age comprise 1.5 percent of the IHS user population but consume considerably higher percentages of IHS health services, i.e., 4.0 percent of the ambulatory medical clinical impressions, 5.8 percent of the inpatient discharges, and 4.7 percent of the inpatient days. Indian children, 1 to 4 years of age, utilize a lower percentage of IHS services than their user population percentage (8.8). They utilize 7.9 percent of the ambulatory medical clinical impressions, 4.4 percent of the inpatient discharges, and 2.8 percent of the inpatient days. The 5 to 14 year old age group consumes the least IHS services relative to their proportion of the IHS user population. They comprise 23.0 percent of the user population, but only consume 12.8 percent of the ambulatory medical clinical impressions, 5.0 percent of the inpatient discharges, and 3.5 percent of the inpatient days.

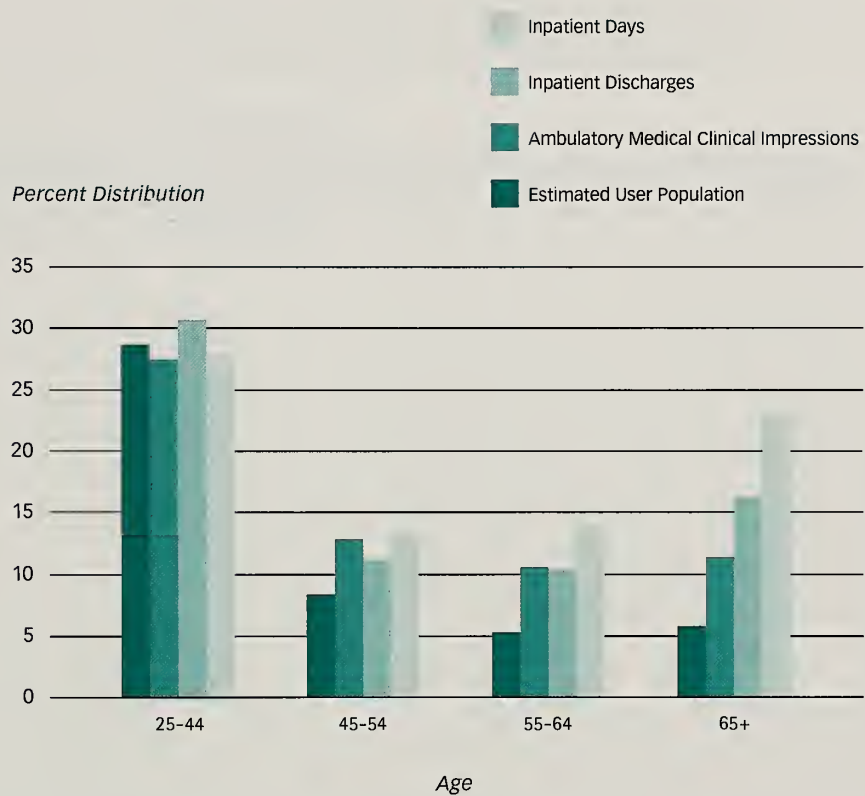






## CHART 19.2

Percent Distributions  
for Population and  
Patient Care Workloads,  
FY 1997





**TABLE 19**

Percent Distributions for Estimated Population, Ambulatory Medical Clinical Impressions,  
and Inpatient Discharges and Days, FY 1997

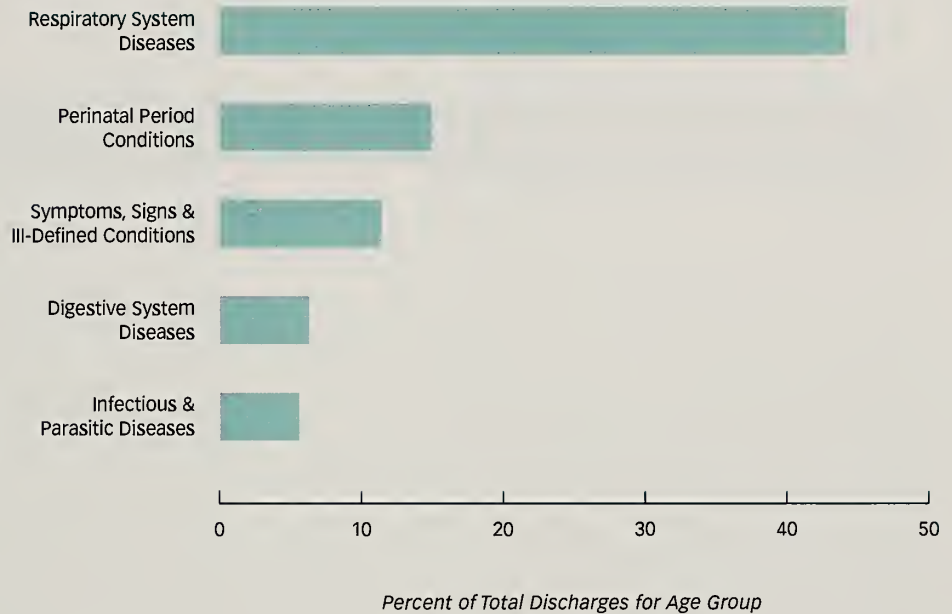
Age									
Distribution	All ages	Under 1 year	1-4 years	5-14 years	15-24 years	25-44 years	45-54 years	55-64 years	65 years & over
Estimated user population	100.0	1.5	8.8	23.0	18.4	28.7	8.4	5.3	5.8
Ambulatory medical clinical impressions	100.0	4.0	7.9	12.8	12.9	27.5	12.9	10.6	11.4
Inpatient discharges	100.0	5.8	4.4	5.0	16.2	30.7	11.2	10.4	16.3
Inpatient days	100.0	4.7	2.8	3.5	10.9	27.8	13.2	13.9	23.0



## CHART 20

### Leading Causes of Hospitalization: Ages Under 1 Year, FY 1997

Respiratory system diseases is the leading cause of hospitalization for patients under 1 year of age in IHS and Tribal direct and contract general hospitals. The second leading cause of hospitalization is perinatal period conditions. These are also the top two leading causes for both males and females in this age group.





**TABLE 20****Ten Leading Causes of Hospitalization for GM&S Patients Under 1 Year of Age, FY 1997**

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	4,638	2,623	2,015	100.0	56.6	43.4
				100.0	100.0	100.0
Respiratory system diseases	2,051	1,197	854	44.2	45.6	42.4
Perinatal period conditions	694	397	297	15.0	15.1	14.7
Symptoms, signs & ill-defined conditions	529	285	244	11.4	10.9	12.1
Digestive system diseases	291	178	113	6.3	6.8	5.6
Infectious and parasitic diseases	261	148	113	5.6	5.6	5.6
Genitourinary system diseases	173	87	86	3.7	3.3	4.3
Supplementary classification	158	72	86	3.4	2.7	4.3
Nervous system & sense organ diseases	123	67	56	2.7	2.6	2.8
Endocrine, nutritional & metabolic diseases	104	64	40	2.2	2.4	2.0
Congenital anomalies	94	58	36	2.0	2.2	1.8
All other	160	70	90	3.4	2.7	4.5

Sources: Direct: On-request Report 21

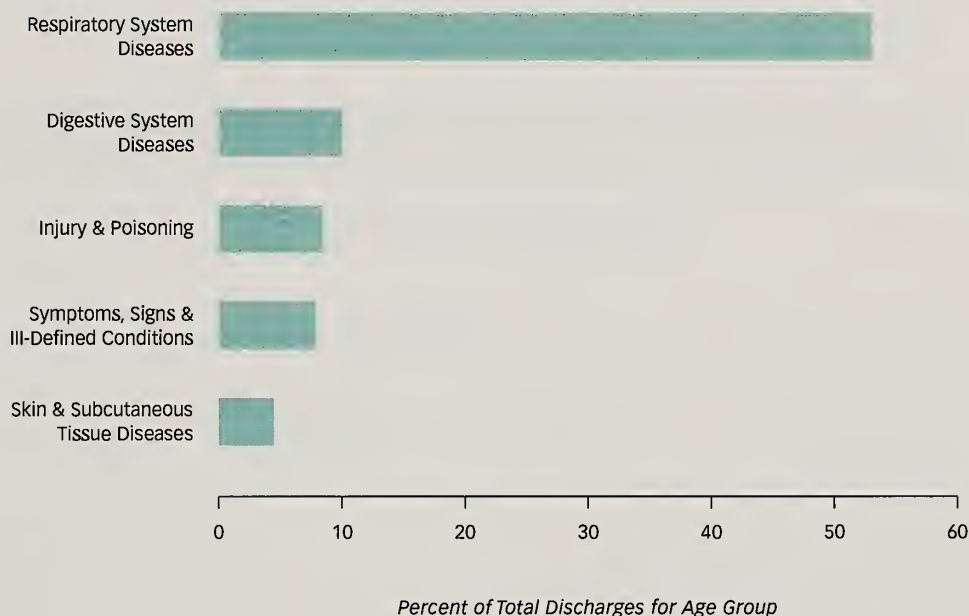
Contract: On-request Report 19



## CHART 21

### Leading Causes of Hospitalization: Ages 1 to 4 Years, FY 1997

Respiratory system diseases is the leading cause of hospitalization for patients, ages 1 to 4 years, in IHS and Tribal direct and contract general hospitals. The second leading cause of hospitalization is digestive system diseases. These are also the top two leading causes for both males and females in this age group.





**TABLE 21****Ten Leading Causes of Hospitalization for GM&S Patients 1 to 4 Years of Age, FY 1997**

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	3,525	1,841	1,684	100.0	52.2	47.8
				100.0	100.0	100.0
Respiratory system diseases	1,872	991	881	53.1	53.8	52.3
Digestive system diseases	356	177	179	10.1	9.6	10.6
Injury & Poisoning	300	174	126	8.5	9.5	7.5
Symptoms, signs & ill-defined conditions	277	154	123	7.9	8.4	7.3
Skin and subcutaneous tissue diseases	158	77	81	4.5	4.2	4.8
Infectious and parasitic diseases	135	69	66	3.8	3.7	3.9
Nervous system & sense organ diseases	101	58	43	2.9	3.2	2.6
Endocrine, nutritional & metabolic disorders	99	55	44	2.8	3.0	2.6
Genitourinary system diseases	98	22	76	2.8	1.2	4.5
Blood and blood-forming organ diseases	36	19	17	1.0	1.0	1.0
All other	93	45	48	2.6	2.4	2.9

**Sources:** Direct: On-request Report 21

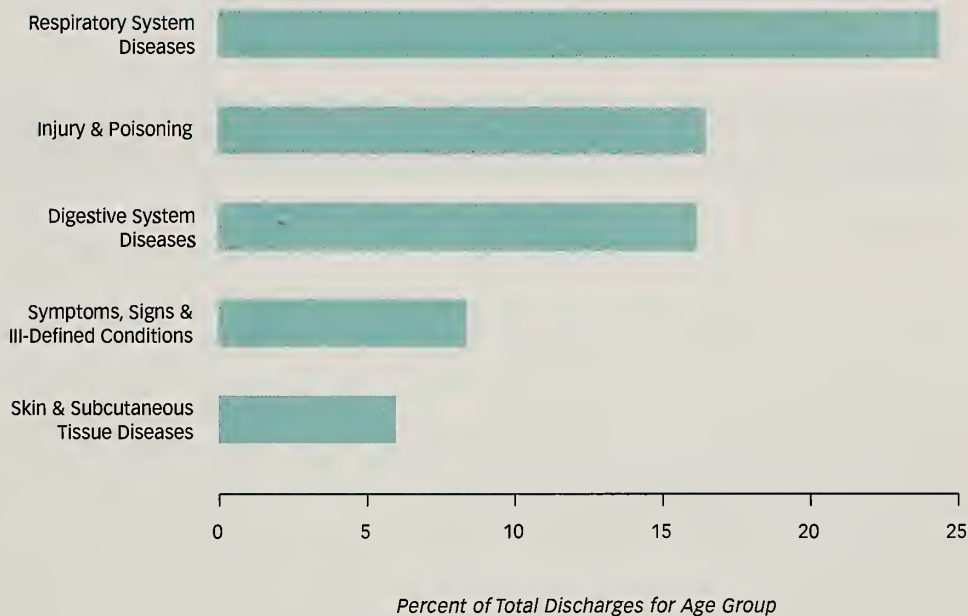
Contract: On-request Report 19



## CHART 22

### Leading Causes of Hospitalization: Ages 5 to 14 Years, FY 1997

Respiratory system diseases is the leading cause of hospitalization for patients, ages 5 to 14 years, in IHS and Tribal direct and contract general hospitals. The second leading cause of hospitalization is injury and poisoning. These are also the top two leading causes for males in this age group. For females, respiratory system diseases is followed by digestive system diseases.





**TABLE 22****Ten Leading Causes of Hospitalization for GM&S Patients 5 to 14 Years of Age, FY 1997**

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	3,995	2,078	1,917	100.0	52.0	48.0
				100.0	100.0	100.0
Respiratory system diseases	973	518	455	24.4	24.9	23.7
Injury & Poisoning	659	391	268	16.5	18.8	14.0
Digestive system diseases	646	363	283	16.2	17.5	14.8
Symptoms, signs & ill-defined conditions	334	171	163	8.4	8.2	8.5
Skin and subcutaneous tissue diseases	240	137	103	6.0	6.6	5.4
Infectious and parasitic diseases	205	112	93	5.1	5.4	4.9
Endocrine, nutritional & metabolic disorders	186	97	89	4.7	4.7	4.6
Genitourinary system diseases	162	34	128	4.1	1.6	6.7
Mental disorders	154	74	80	3.9	3.6	4.2
Nervous system & sense organ diseases	134	66	68	3.4	3.2	3.5
All other	302	115	187	7.6	5.5	9.8

Sources: Direct: On-request Report 21

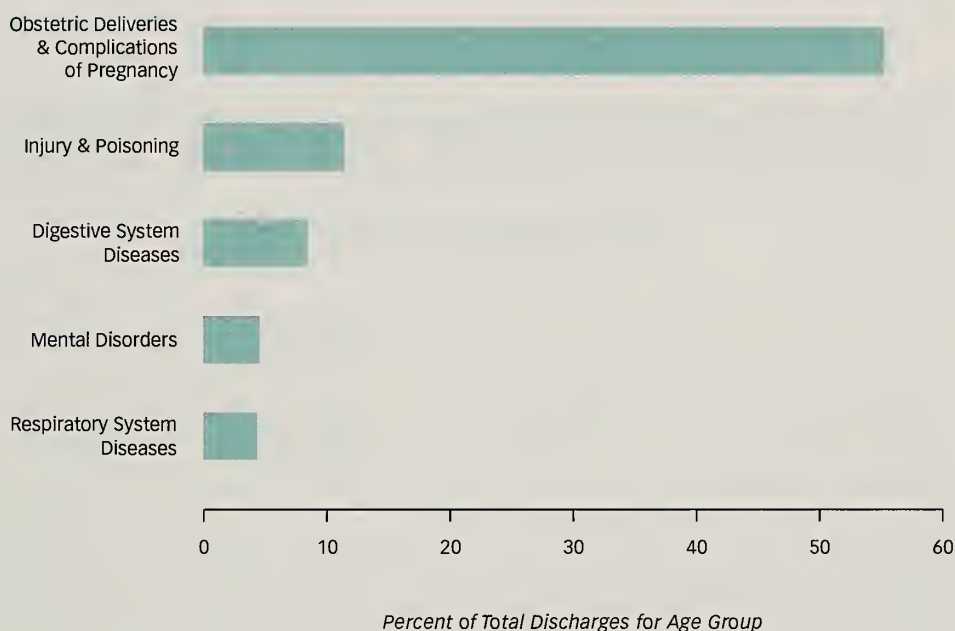
Contract: On-request Report 19



## CHART 23

### Leading Causes of Hospitalization: Ages 15 to 24 Years, FY 1997

Obstetric deliveries and complications of pregnancy is the leading cause of hospitalization for patients, ages 15 to 24 years, in IHS and Tribal direct and contract general hospitals. Obviously, this is the leading cause for female patients; for male patients, the leading cause is injury and poisoning. The second leading cause of hospitalization for all patients in this age group is injury and poisoning due to the high number of discharges for male patients. However, this is not the second leading cause for either sex, it is digestive system diseases.





**TABLE 23****Ten Leading Causes of Hospitalization for GM&S Patients 15 to 24 Years of Age, FY 1997**

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	12,871	2,549	10,322	100.0	19.8	80.2
				100.0	100.0	100.0
Obstetric deliveries and complications of pregnancy & puerperium	7,129	0	7,129	55.4	0.0	69.1
Injury & Poisoning	1,485	909	576	11.5	35.7	5.6
Digestive system diseases	1,089	333	756	8.5	13.1	7.3
Mental disorders	598	308	290	4.6	12.1	2.8
Respiratory system diseases	563	239	324	4.4	9.4	3.1
Genitourinary system diseases	467	45	422	3.6	1.8	4.1
Symptoms, signs & ill-defined conditions	330	130	200	2.6	5.1	1.9
Skin and subcutaneous tissue diseases	261	152	109	2.0	6.0	1.1
Endocrine, nutritional & metabolic disorders	212	120	92	1.6	4.7	0.9
Supplementary classification	183	53	130	1.4	2.1	1.3
All other	554	260	294	4.3	10.2	2.8

**Sources:** Direct: On-request Report 21

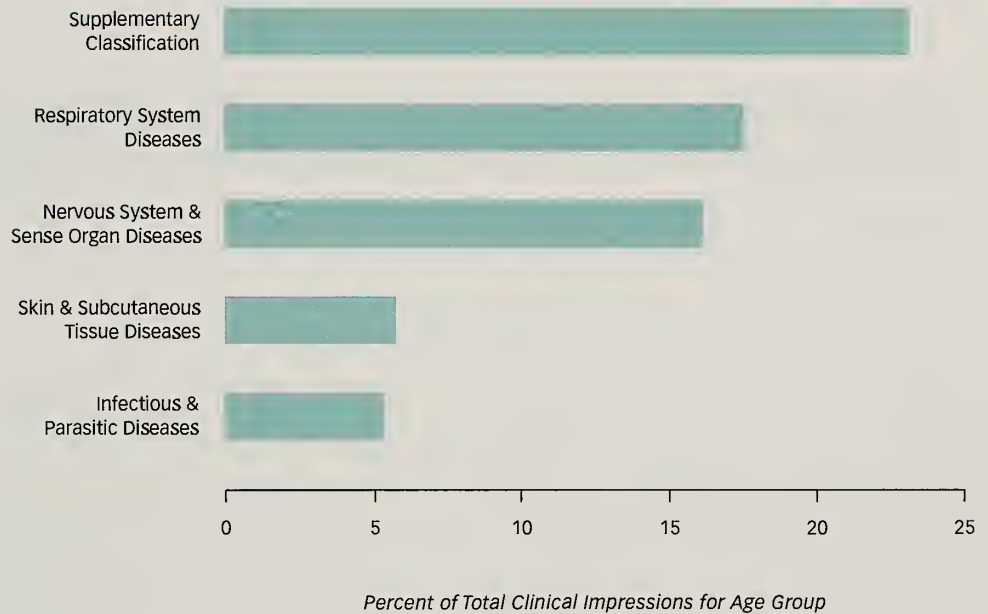
Contract: On-request Report 19



## CHART 24

### Leading Causes of Ambulatory Medical Visits: Ages Under 1 Year, FY 1997

Supplementary classification conditions (e.g., other preventive health services, well child care, physical examination, tests only, hospital/medical/surgical follow-up) is the leading cause of ambulatory medical visits for patients under 1 year of age in IHS and Tribal direct and contract general facilities. The second leading cause of ambulatory medical visits is respiratory system diseases. These are also the top two leading causes for both males and females in this age group.





**TABLE 24****Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients Under 1 Year of Age, FY 1997**

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	313,665	163,883	149,782	100.0	52.2	47.8
				100.0	100.0	100.0
Supplementary classification	72,718	36,708	36,010	23.2	22.4	24.0
Respiratory system diseases	55,269	29,875	25,394	17.6	18.2	17.0
Nervous system & sense organ diseases	50,872	27,071	23,801	16.2	16.5	15.9
Skin & subcutaneous tissue diseases	18,337	9,394	8,943	5.8	5.7	6.0
Infectious & parasitic diseases	16,861	8,848	8,013	5.4	5.4	5.3
Symptoms, signs & ill-defined conditions	14,969	8,013	6,956	4.8	4.9	4.6
Digestive system diseases	6,504	3,454	3,050	2.1	2.1	2.0
Perinatal period conditions	5,994	3,275	2,719	1.9	2.0	1.8
Injury & poisoning	3,048	1,634	1,414	1.0	1.0	0.9
Congenital anomalies	2,630	1,413	1,217	0.8	0.9	0.8
All other	66,463	34,198	32,265	21.2	20.9	21.5

**Sources:** Direct: On-request Report 21

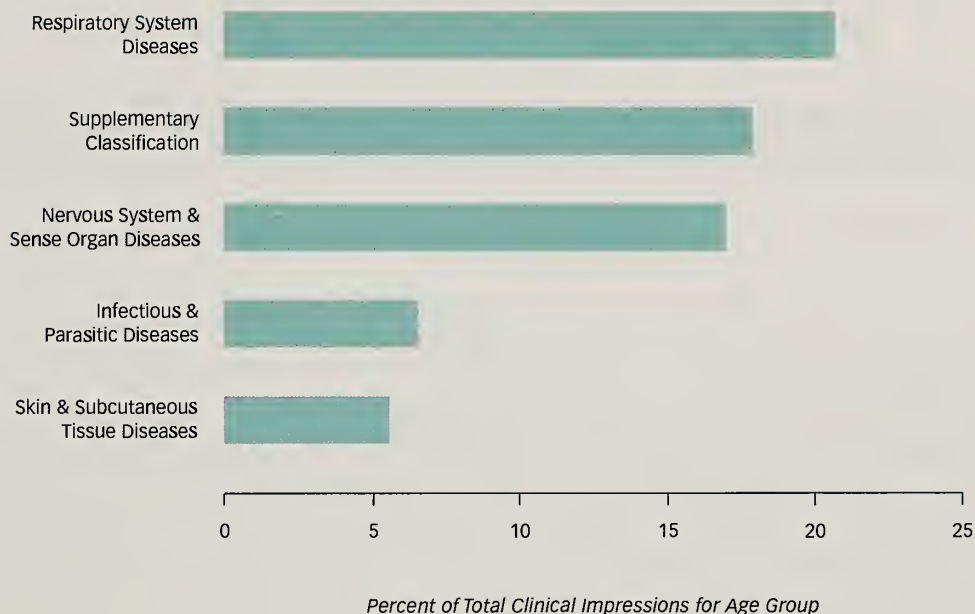
Contract: On-request Report 19



## CHART 25

### Leading Causes of Ambulatory Medical Visits: Ages 1 to 4 Years, FY 1997

Respiratory system diseases is the leading cause of ambulatory medical visits for patients, ages 1 to 4 years, in IHS and Tribal direct and contract general facilities. The second leading cause of ambulatory medical visits is supplementary classification conditions. These are also the top two leading causes for both males and females in this age group.





**TABLE 25****Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 1 to 4 Years of Age, FY 1997**

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	616,528	314,517	302,011	100.0	51.0	49.0
				100.0	100.0	100.0
Respiratory system diseases	127,764	66,107	61,657	20.7	21.0	20.4
Supplementary classification	110,093	55,853	54,240	17.9	17.8	18.0
Nervous system & sense organ diseases	104,925	54,704	50,221	17.0	17.4	16.6
Infectious & parasitic diseases	40,454	19,437	21,017	6.6	6.2	7.0
Skin & subcutaneous tissue diseases	34,270	16,905	17,365	5.6	5.4	5.7
Symptoms, signs & ill-defined conditions	27,347	13,738	13,609	4.4	4.4	4.5
Injury & poisoning	25,563	14,263	11,300	4.1	4.5	3.7
Digestive system diseases	10,365	5,199	5,166	1.7	1.7	1.7
Genitourinary system diseases	5,763	1,739	4,024	0.9	0.6	1.3
Mental disorders	3,869	2,278	1,591	0.6	0.7	0.5
All other	126,115	64,294	61,821	20.5	20.4	20.5

Sources: Direct: Annual Report 1C

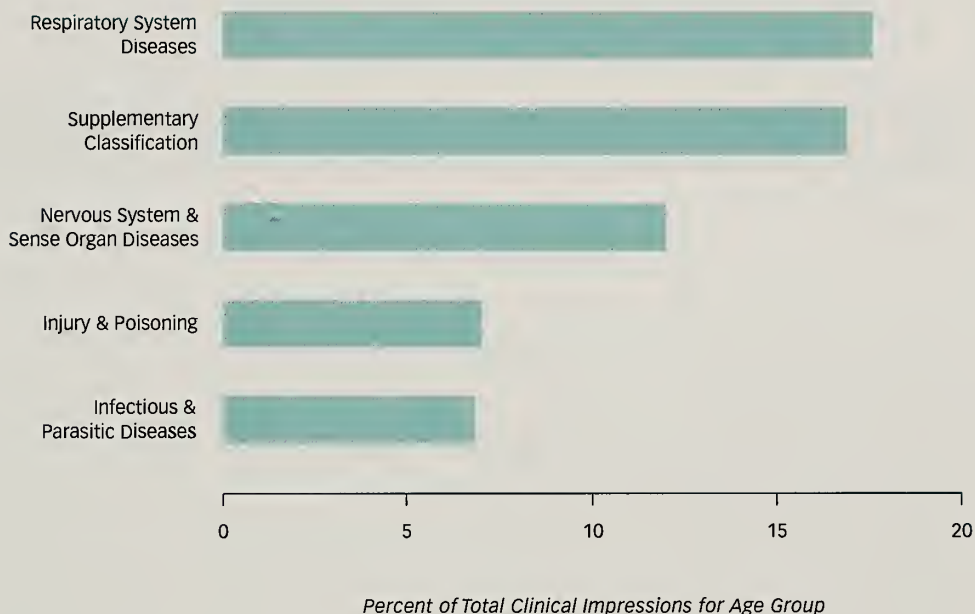
Contract: Annual Report 3A



## CHART 26

### Leading Causes of Ambulatory Medical Visits: Ages 5 to 14 Years, FY 1997

Respiratory system diseases is the leading cause of ambulatory medical visits for patients, ages 5 to 14 years, in IHS and Tribal direct and contract general facilities. The second leading cause of ambulatory medical visits is supplementary classification conditions (e.g., other preventive health services, well child care, physical examination, tests only, hospital/medical/surgical follow-up). These are also the top two leading causes for both males and females in this age group, but in reverse order for males.





**TABLE 26****Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 5 to 14 Years of Age, FY 1997**

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	999,158	494,606	504,552	100.0	49.5	50.5
				100.0	100.0	100.0
Respiratory system diseases	175,630	85,005	90,625	17.6	17.2	18.0
Supplementary classification	168,884	85,675	83,209	16.9	17.3	16.5
Nervous system & sense organ diseases	119,943	56,980	62,963	12.0	11.5	12.5
Injury & poisoning	70,410	40,061	30,349	7.0	8.1	6.0
Infectious & parasitic diseases	67,498	27,599	39,899	6.8	5.6	7.9
Skin & subcutaneous tissue diseases	61,469	30,091	31,378	6.2	6.1	6.2
Symptoms, signs & ill-defined conditions	46,983	22,090	24,893	4.7	4.5	4.9
Mental disorders	45,117	30,454	14,663	4.5	6.2	2.9
Musculoskeletal system diseases	15,292	7,174	8,118	1.5	1.5	1.6
Digestive system diseases	14,572	6,987	7,585	1.5	1.4	1.5
All other	213,360	102,490	110,870	21.4	20.7	22.0

**Sources:** Direct: Annual Report 1C

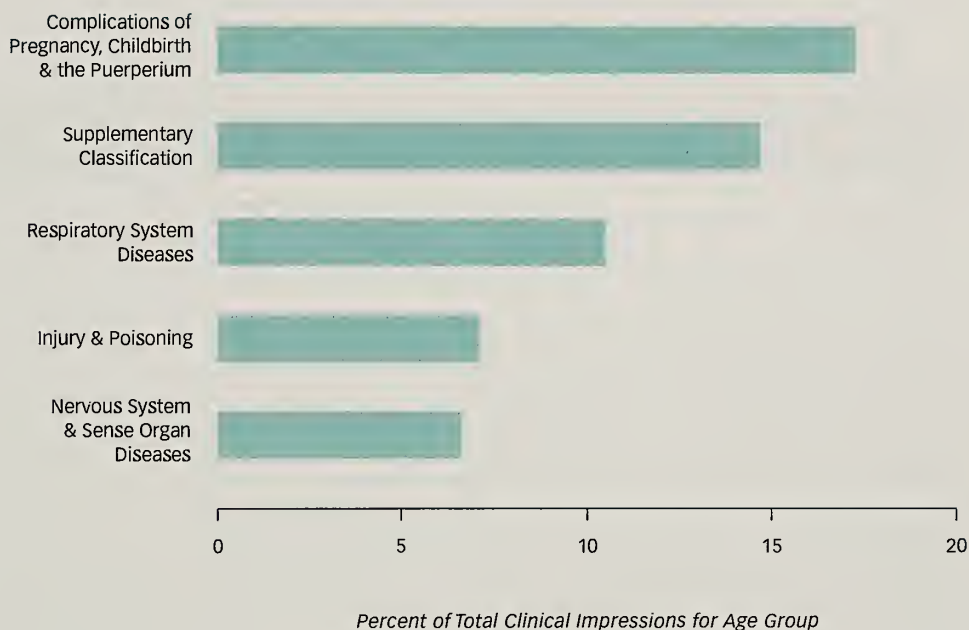
Contract: Annual Report 3A



## CHART 27

### Leading Causes of Ambulatory Medical Visits: Ages 15 to 24 Years, FY 1997

Complications of pregnancy, childbirth, and the puerperium is the leading cause of ambulatory medical visits for patients, ages 15 to 24 years, in IHS and Tribal direct and contract general facilities. The second leading cause of ambulatory medical visits is supplementary classification conditions (e.g., other preventive health services, well child care, physical examination, tests only, hospital/medical/surgical follow-up). These are also the top two leading causes for females in this age group. For males, the top two leading causes are supplementary classification conditions and injury and poisoning.





**TABLE 27****Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 15 to 24 Years of Age, FY 1997**

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	1,011,234	301,320	709,914	100.0	29.8	70.2
				100.0	100.0	100.0
Complications of pregnancy, childbirth & the puerperium	174,822	0	174,822	17.3	0.0	24.6
Supplementary classification	148,343	48,211	100,132	14.7	16.0	14.1
Respiratory system diseases	106,635	38,833	67,802	10.5	12.9	9.6
Injury & poisoning	71,328	41,306	30,022	7.1	13.7	4.2
Nervous system & sense organ diseases	67,224	25,942	41,282	6.6	8.6	5.8
Skin & subcutaneous tissue diseases	51,860	22,012	29,848	5.1	7.3	4.2
Symptoms, signs & ill-defined conditions	47,011	14,302	32,709	4.6	4.7	4.6
Genitourinary system disease	45,793	2,411	43,382	4.5	0.8	6.1
Mental disorders	41,736	20,180	21,556	4.1	6.7	3.0
Musculoskeletal system diseases	32,293	13,215	19,078	3.2	4.4	2.7
All other	224,189	74,908	149,281	22.2	24.9	21.0

Sources: Direct: Annual Report 1C

Contract: Annual Report 3A



# Glossary of ICD-9 Codes

## List of 72 Selected Causes of Death (1979-Present)

Cause of Death	ICD-9 Codes
Shigellosis and amebiasis	004, 006
Certain other intestinal infections	007-009
Tuberculosis	010-018
Tuberculosis of respiratory system	010-012
Other tuberculosis	013-018
Whooping cough	033
Streptococcal sore throat, scarlatina, and erysipelas	034-035
Meningococcal infection	036
Septicemia	038
Acute poliomyelitis	045
Measles	055
Viral hepatitis	070
Syphilis	090-097
All other infectious and parasitic diseases	001-003, 005, 020-032, 037, 039-041, 042-044, 046-054, 056-066, 071-088, 098-139
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	140-208
Malignant neoplasms of lip, oral cavity, and pharynx	140-149
Malignant neoplasms of digestive organs and peritoneum	150-159
Malignant neoplasms of respiratory and intrathoracic organs	160-165
Malignant neoplasm of breast	174-175
Malignant neoplasms of genital organs	179-187
Malignant neoplasms of urinary organs	188-189
Malignant neoplasms of all other and unspecified sites	170-173, 190-199
Leukemia	204-208
Other malignant neoplasms of lymphatic and hematopoietic tissues	200-203
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature	210-239
Diabetes mellitus	250
Nutritional deficiencies	260-269
Anemias	280-285
Meningitis	320-322
Major cardiovascular diseases	390-448
Diseases of heart	390-398, 402, 404-429
Rheumatic fever and rheumatic heart disease	390-398
Hypertensive heart disease	402
Hypertensive heart and renal disease	404
Ischemic heart disease	410-414
Acute myocardial infarction	410
Other acute and subacute forms of ischemic heart disease	411
Angina pectoris	413
Old myocardial infarction and other forms of chronic ischemic heart disease	412, 414
Other diseases of endocardium	424
All other forms of heart disease	415-423, 425-429
Hypertension with or without renal disease	401, 403
Cerebrovascular diseases	430-438
Intracerebral and other intracranial hemorrhage	431-432
Cerebral thrombosis and unspecified occlusion of cerebral arteries	434.0, 434.9
Cerebral embolism	434.1
All other and late effects of cerebrovascular diseases	430, 433, 435-438



## Cause of Death

## ICD-9 Codes

Atherosclerosis	440
Other diseases of arteries, arterioles, and capillaries	441-448
Acute bronchitis and bronchiolitis	466
Pneumonia and influenza	480-487
Pneumonia	480-486
Influenza	487
Chronic obstructive pulmonary diseases and allied conditions	490-496
Bronchitis, chronic and unspecified	490-491
Emphysema	492
Asthma	493
Other chronic obstructive pulmonary diseases and allied conditions	494-496
Ulcer of stomach and duodenum	531-533
Appendicitis	540-543
Hernia of abdominal cavity and intestinal obstruction without mention of hernia	550-553, 560
Chronic liver disease and cirrhosis	571
Cholelithiasis and other disorders of gallbladder	574-575
Nephritis, nephrotic syndrome, and nephrosis	580-589
Acute glomerulonephritis and nephrotic syndrome	580-581
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified	582-583, 587
Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause	584-586, 588-589
Infections of kidney	590
Hyperplasia of prostate	600
Complications of pregnancy, childbirth, and the puerperium	630-676
Pregnancy with abortive outcome	630-638
Other complications of pregnancy, childbirth, and the puerperium	640-676
Congenital anomalies	740-759
Certain conditions originating in the perinatal period	760-779
Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome	767-769
Other conditions originating in the perinatal period	760-766, 770-779
Symptoms, signs, and ill-defined conditions	780-799
All other diseases	Residual
Accidents and adverse effects	E800-E949
Motor vehicle accidents	E810-E825
All other accidents and adverse effects	E800-E807, E826-E949
Suicide	E950-E959
Homicide and legal intervention	E960-E978
All other external causes	E980-E999

## List of 61 Selected Causes of Infant Death (1979-Present)

Certain intestinal infections	008-009
Whooping cough	033
Meningococcal infection	036
Septicemia	038
Viral diseases	045-079
Congenital syphilis	090
Remainder of infectious and parasitic diseases	001-007, 010-032, 034-035, 037, 039-041, 042-044, 080-088, 091-139
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	140-208
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature	210-239
Diseases of thymus gland	254
Cystic fibrosis	277.0
Diseases of blood and blood-forming organs	280-289
Meningitis	320-322



## Cause of Death

## ICD-9 Codes

Other diseases of nervous system and sense organs . . . . .	323-389
Acute upper respiratory infections . . . . .	460-465
Bronchitis and bronchiolitis . . . . .	466, 490-491
Pneumonia and influenza . . . . .	480-487
Pneumonia . . . . .	480-486
Influenza . . . . .	487
Remainder of diseases of respiratory system . . . . .	470-478, 492-519
Hernia of abdominal cavity and intestinal obstruction without mention of hernia . . . . .	550-553, 560
Gastritis, duodenitis, and noninfective enteritis and colitis . . . . .	535, 555-558
Remainder of diseases of digestive system . . . . .	520-534, 536-543, 562-579
Congenital anomalies . . . . .	740-759
Anencephalus and similar anomalies . . . . .	740
Spina bifida . . . . .	741
Congenital hydrocephalus . . . . .	742.3
Other congenital anomalies of central nervous system and eye . . . . .	742.0-742.2, 742.4-742.9, 743
Congenital anomalies of heart . . . . .	745-746
Other congenital anomalies of circulatory system . . . . .	747
Congenital anomalies of respiratory system . . . . .	748
Congenital anomalies of digestive system . . . . .	749-751
Congenital anomalies of genitourinary system . . . . .	752-753
Congenital anomalies of musculoskeletal system . . . . .	754-756
Down's syndrome . . . . .	758.0
Other chromosomal anomalies . . . . .	758.1-758.9
All other and unspecified congenital anomalies . . . . .	744, 757, 759
Certain conditions originating in the perinatal period . . . . .	760-779
Newborn affected by maternal conditions which may be unrelated to present pregnancy . . . . .	760
Newborn affected by maternal complications of pregnancy . . . . .	761
Newborn affected by complications of placenta, cord, and membranes . . . . .	762
Newborn affected by other complications of labor and delivery . . . . .	763
Slow fetal growth and fetal malnutrition . . . . .	764
Disorders relating to short gestation and unspecified low birthweight . . . . .	765
Disorders relating to long gestation and high birthweight . . . . .	766
Birth trauma . . . . .	767
Intrauterine hypoxia and birth asphyxia . . . . .	768
Fetal distress in liveborn infant . . . . .	768.2-768.4
Birth asphyxia . . . . .	768.5-768.9
Respiratory distress syndrome . . . . .	769
Other respiratory conditions of newborn . . . . .	770
Infections specific to the perinatal period . . . . .	771
Neonatal hemorrhage . . . . .	772
Hemolytic disease of newborn, due to isoimmunization, and other perinatal jaundice . . . . .	773-774
Syndrome of "infant of a diabetic mother" and neonatal diabetes mellitus . . . . .	775.0-775.1
Hemorrhagic disease of newborn . . . . .	776.0
All other and ill-defined conditions originating in the perinatal period . . . . .	775.2-775.9, 776.1-779
Symptoms, signs, and ill-defined conditions . . . . .	780-799
Sudden infant death syndrome . . . . .	798.0
Symptoms, signs, and all other ill-defined conditions . . . . .	780-797, 798.1-799
Accidents and adverse effects . . . . .	E800-E949
Inhalation and ingestion of food or other object causing obstruction of respiratory tract or suffocation . . . . .	E911-E912
Accidental mechanical suffocation . . . . .	E913
Other accidental causes and adverse effects . . . . .	E800-E910, E914-E949
Homicide . . . . .	E960-E969
Child battering and other maltreatment . . . . .	E967
Other homicide . . . . .	E960-E966, E968-E969
All other causes . . . . .	Residual





## Additional Causes of Death and Their Corresponding ICD-9 Codes Which May Be Found in This Publication

*(These categories are not included as part of the 72 cause of death or 61 cause of infant death lists.*

*They are independent of these two lists but are valid cause of death codes to use for the causes indicated)*

Cause of Death	ICD-9 Codes
Alcoholism deaths	291, 303, 305.0, 357.5, 425.5, 535.3, 571.0-571.3, 790.3, E860
Alzheimer's disease deaths	331.0
Breast cancer (females)	174
Cervical cancer	180
Colon-rectal cancer	153.0-154.3, 154.8, 159.0
Drug related deaths	292, 304, 305.2-305.9, E850-E858, E950.0-E950.5, E962.0, E980.0-E980.5
Gastroenteric deaths	004, 006-009, 535, 555-556, 558, 562
Human immunodeficiency virus (HIV) infection	042-044
Injury by firearms	E922, E955.0-E955.4, E965.0-E965.4, E970, E985.0-E985.4
Injury and poisoning	E800-E807, E810-E825, E826-E949, E950-E959, E960-E978, E980-E989, E990-E999
Other injuries	E980-E989, E990-E999
Lung cancer	162.2-162.9
Maternal deaths	630-676
Prostate cancer	185

## List of ICD-9 Codes Used in Patient Care Charts and Tables

Diagnostic Category	ICD-9 Codes
Infectious and parasitic diseases	001-139
Neoplasms	140-239
Endocrine, nutritional, and metabolic diseases and immunity disorders	240-279
Diseases of the blood and blood-forming organs	280-289
Mental disorders	290-319
Diseases of the nervous system and sense organs	320-389
Diseases of the circulatory system	390-459
Diseases of the respiratory system	460-519
Diseases of the digestive system	520-579
Diseases of the genitourinary system	580-629
Complications of pregnancy, childbirth, and the puerperium	630-676
Diseases of the skin and subcutaneous tissue	680-709
Diseases of the musculoskeletal system and connective tissue	710-739
Congenital anomalies	740-759
Certain conditions originating in the perinatal period	760-779
Symptoms, signs, and ill-defined conditions	780-799
Injury and poisoning	E800-E999
Supplementary classification (classification of factors influencing health status and contact with health service)	V01-V99

















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